



NASA SP-7039(21)  
Section 2  
Indexes

# NASA PATENT ABSTRACTS BIBLIOGRAPHY



A CONTINUING BIBLIOGRAPHY

Section 2 • Indexes

JULY 1982

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION



## ACCESSION NUMBER RANGES

<i>Bibliography Number</i>	<i>STAR Accession Numbers</i>
NASA SP-7039(04)	N69-20701 – N73-33931
NASA SP-7039(12)	N74-10001 – N77-34042
NASA SP-7039(13)	N78-10001 – N78-22018
NASA SP-7039(14)	N78-22019 – N78-34034
NASA SP-7039(15)	N79-10001 – N79-21993
NASA SP-7039(16)	N79-21994 – N79-34158
NASA SP-7039(17)	N80-10001 – N80-22254
NASA SP-7039(18)	N80-22255 – N80-34339
NASA SP-7039(19)	N81-10001 – N81-21997
NASA SP-7039(20)	N81-21998 – N81-34139
NASA SP-7039(21)	N82-10001 – N82-22140



**NASA SP-7039(21)**  
**Section 2**  
**Indexes**

**NASA**

**PATENT  
ABSTRACTS  
BIBLIOGRAPHY**

**A CONTINUING BIBLIOGRAPHY**

**Section 2 • Indexes**

Indexes for the annotated references to NASA-owned inventions covered by U.S. patents and applications for patent that were announced in *Scientific and Technical Aerospace Reports (STAR)* between May 1969 and June 1982. This issue supersedes all previous Index Sections.



This supplement is available as NTISUB/111/093 from the National Technical Information Service (NTIS), Springfield, Virginia 22161 at the price of \$12.50 domestic; \$25.50 foreign for standing orders. Please note: Standing orders are subscriptions which do not terminate at the end of a year, as do regular subscriptions, but continue indefinitely unless specifically terminated by the subscriber.



# INTRODUCTION

Several thousand inventions result each year from the aeronautical and space research supported by the National Aeronautics and Space Administration. The inventions having important use in government programs or significant commercial potential are usually patented by NASA. These inventions cover practically all fields of technology and include many that have useful and valuable commercial application.

NASA inventions best serve the interests of the United States when their benefits are available to the public. In many instances, the granting of nonexclusive or exclusive licenses for the practice of these inventions may assist in the accomplishment of this objective. This bibliography is published as a service to companies, firms, and individuals seeking new, licensable products for the commercial market.

The *NASA Patent Abstracts Bibliography (NASA PAB)* is a semiannual NASA publication containing comprehensive abstracts and indexes of NASA-owned inventions covered by U.S. patents and applications for patent. The citations included in *NASA PAB* were originally published in NASA's *Scientific and Technical Aerospace Reports (STAR)* and cover *STAR* announcements made since May 1969.

For the convenience of the user, each issue of *NASA PAB* has a separately bound Abstract Section (Section 1) and Index Section (Section 2). Although each Abstract Section covers only the indicated six-month period, the Index Section is cumulative covering all NASA-owned inventions announced in *STAR* since 1969. Thus a complete set of *NASA PAB* would consist of the Abstract Sections of Issue 04 (January 1974) and Issue 12 (January 1978) and the Abstract Section for all subsequent issues and the Index Section for the most recent issue.

The 87 citations published in this issue of the Abstract Section cover the period January 1982 through June 1982. The Index Section references over 4000 citations covering the period May 1969 through June 1982.

## ABSTRACT SECTION (SECTION 1)

This *PAB* issue incorporates the 1975 *STAR* category revisions which include 10 major subdivisions divided into 74 specific categories and one general category/division. (See Table of Contents for the scope note of each category under which are grouped appropriate NASA inventions.) This new scheme was devised in lieu of the 34 category divisions which were utilized in *PAB* supplements (01) through (06) covering *STAR* abstracts from May 1969 through January 1974. Each entry in the Abstract Section consists of a *STAR* citation accompanied by an abstract and a key illustration taken from the patent or application for patent drawing. Entries are arranged in subject category in order of the ascending NASA Accession Number originally assigned in *STAR* to the invention. The range of NASA Accession Numbers within each issue is printed on the inside front cover.

*Abstract Citation Data Elements:* Each of the abstract citations has several data elements useful for identification and indexing purposes, as follows:

- NASA Accession Number
- NASA Case Number
- Inventor's Name
- Title of Invention
- U.S. Patent Application Serial Number
- U.S. Patent Number (for issued patents only)
- U.S. Patent Office Classification Number(s)  
(for issued patents only)

These data elements in the citation of the abstract are depicted in the Typical Citation and Abstract reproduced on the following page and are also used in the indexes.



# TYPICAL CITATION AND ABSTRACT

NASA SPONSORED  
DOCUMENT

AVAILABLE ON  
MICROFICHE

NASA  
ACCESSION  
NUMBER

**N82-18203\*** National Aeronautics and Space Administration,  
Langley Research Center, Hampton, Va.

SOURCE

TITLE

**SLOTTED VARIABLE CAMBER FLAP Patent Application**  
Dana G. Andrews, inventor (to NASA) (Boeing Commercial  
Airplane Co., Seattle) Filed 30 Oct. 1981 13 p Sponsored  
by NASA

US PATENT  
APPLICATIONS  
SERIAL NUMBER

INVENTOR

(NASA Case-LAR-12541-1; US-Patent-Appl-SN-315588) Avail:  
NTIS HC A02/MF A01 CSCL 01C

AVAILABILITY

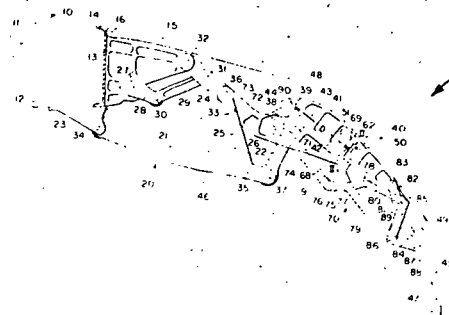
NASA CASE  
NUMBER

ABSTRACT

Variable camber actuator assemblies broaden the range of speeds at which lift to drag performance is maximized for slotted flap wings. Lift is improved by varying wing camber with rotational flap movements that do not introduce wing slots and induced drag. Forward flaps are secured to forward flange links which extend from, and are a part of, forward flap linkage assemblies. The forward flaps rotate about flap pivots with their rotational displacement controlled by variable camber actuator assemblies located between the forward flaps and the forward flange links. Rear flaps are held relative to the forward flaps by rear flap linkage assemblies which may act independently from the forward flap linkage assemblies and the variable camber actuator assemblies. Wing camber is varied by rotating the flaps with the variable camber actuator assemblies while the flaps are in a deployed or tucked position. Rotating flaps in a tucked position does not introduce significant wing surface discontinuities, and reduces aircraft fuel consumption on most flight profiles. NASA

COSATI CODE

KEY ILLUSTRATION



## INDEX SECTION (SECTION 2)

The Index Section is divided into five indexes which are cross-indexed and are useful in locating a single invention or groups of inventions.

Each of the five indexes utilizes basic data elements: (1) Subject Category Number, (2) NASA Accession Number, and (3) NASA Case Number, in addition to other specific index terms.

**Subject Index:** Lists all inventions according to appropriate alphabetized technical term and indicates the related NASA Case Number, the Subject Category Number, and the NASA Accession Number.

**Inventor Index:** Lists all inventions according to alphabetized names of inventors and indicates the related NASA Case Number, the Subject Category Number, and the NASA Accession Number.

**Source Index:** Lists all inventions according to alphabetized source of invention (i.e., name of contractor or government installation where invention was made) and indicates the related NASA Case Number, the Subject Category Number, and the NASA Accession Number.

**Number Index:** Lists inventions in order of ascending (1) NASA Case Number, (2) U.S. Patent Application Serial Number, (3) U.S. Patent Classification Number, and (4) U.S. Patent Number and indicates the related Subject Category Number and the NASA Accession Number.

**Accession Number Index:** Lists all inventions in order of ascending NASA Accession Number and indicates the related Subject Category Number, the NASA Case Number, the U.S. Patent Application Serial Number, the U.S. Patent Classification Number, and the U.S. Patent Number.

## HOW TO USE THIS PUBLICATION TO IDENTIFY NASA INVENTIONS

To identify one or more NASA inventions within a specific technical field or subject, several techniques are possible when using the flexibility incorporated into the *NASA PAB*.

(1) *Using Subject Category:* To identify all NASA inventions in any one of the subject categories in this issue of *NASA PAB*, select the desired Subject Category in the Abstract Section (Section 1) and find the inventions abstracted thereunder.

(2) *Using Subject Index:* To identify all NASA inventions listed under a desired technical subject index term, (A) turn to the cumulative Subject Index in the Index Section and find the invention(s) listed under the desired technical subject term. (B) Note the indicated Accession Number and the Subject Category Number. (C) Using the indicated Accession Number, turn to the inside front cover of the Index Section to determine which issue of the Abstract Section includes the Accession Number desired. (D) To find the abstract of the particular invention in the issue of the Abstract Section selected, (i) use the Subject Category Number to locate the Subject Category and (ii) use the Accession Number to locate the desired invention within the Subject Category listing.

(3) *Using Patent Classification Index:* To identify all inventions covered by issued NASA patents (does not include applications for patent) within a desired Patent Classification, (A) turn to the Patent Classification Number in the Number Index of Section 2 and find the associated invention(s), and (B) follow the instructions outlined in (2)(B), and (D) above.

## **PUBLIC AVAILABILITY OF COPIES OF PATENTS AND PATENT APPLICATIONS**

Copies of U.S. patents may be purchased directly from the U.S. Patent and Trademark Office, Washington, D.C. 20231, for fifty cents a copy. When ordering patents, the U.S. Patent Number should be used, and payment must be remitted in advance, preferably by money order or check payable to the Commissioner of Patents and Trademarks. Prepaid purchase coupons for ordering are also available from the Patent and Trademark Office.

*NASA patent application specifications* are sold in paper copy by the National Technical Information Service at price code A02 (\$6.00 domestic; \$12.00 foreign). Microfiche are sold at price code A01 (\$4.00 domestic; \$8.00 foreign). The US-Patent-Appl-SN-number should be used in ordering either paper copy or microfiche from NTIS.

## **LICENSES FOR COMMERCIAL USE: INQUIRIES AND APPLICATIONS FOR LICENSE**

NASA inventions, abstracted in *NASA PAB*, are available for nonexclusive or exclusive licensing in accordance with the NASA Patent Licensing Regulations. It is significant that all licenses for NASA inventions shall be by express written instruments and that no license will be granted or implied in a NASA invention except as provided in the NASA Patent Licensing Regulations.

Inquiries concerning the NASA Patent Licensing Program or the availability of licenses for the commercial use of NASA-owned inventions covered by U.S. patents or pending applications for patent should be forwarded to the NASA Patent Counsel of the NASA installation having cognizance of the specific invention, or the Assistant General Counsel for Patent Matters, Code GP-4, National Aeronautics and Space Administration, Washington, D.C. 20546. Inquiries should refer to the NASA Case Number, the Title of the Invention, and the U.S. Patent Number or the U.S. Application Serial Number assigned to the invention as shown in *NASA PAB*.

The NASA Patent Counsel having cognizance of the invention is determined by the first three letters or prefix of the NASA Case Number assigned to the invention. The addresses of NASA Patent Counsels are listed alongside the NASA Case Number prefix letters in the following table. Formal application of license must be submitted on the NASA Form, Application for NASA Patent License, which is available upon request from any NASA Patent Counsel.



**NASA Case  
Number  
Prefix Letters**

ARC-xxxxx  
XAR-xxxxx

ERC-xxxxx  
XER-xxxxx  
HQN-xxxxx  
XHQ-xxxxx

GSC-xxxxx  
XGS-xxxxx

KSC-xxxxx  
XKS-xxxxx

LAR-xxxxx  
XLA-xxxxx

LEW-xxxxx  
XLE-xxxxx

MSC-xxxxx  
XMS-xxxxx

MFS-xxxxx  
XMF-xxxxx

NPO-xxxxx  
XNP-xxxxx  
FRC-xxxxx  
XFR-xxxxx  
WOO-xxxxx

**Address of Cognizant  
NASA Patent Counsel**

Ames Research Center  
Mail Code: 200-11A  
Moffett Field, California 94035  
Telephone: (415)965-5104

NASA Headquarters  
Mail Code: GP-4  
Washington, D.C. 20546  
Telephone: (202)755-3954

Goddard Space Flight Center  
Mail Code: 204  
Greenbelt, Maryland 20771  
Telephone: (301)344-7351

John F. Kennedy Space Center  
Mail Code: PT-PAT  
Kennedy Space Center, Florida 32899  
Telephone: (305)867-2544

Langley Research Center  
Mail Code: 279  
Hampton, Virginia 23365  
Telephone: (804)827-8725

Lewis Research Center  
Mail Code: 500-318  
21000 Brookpark Road  
Cleveland, Ohio 44135  
Telephone: (216)433-6346

Lyndon B. Johnson Space Center  
Mail Code: AL3  
Houston, Texas 77058  
Telephone: (713)483-4871

George C. Marshall Space Flight Center  
Mail Code: CC01  
Huntsville, Alabama 35812  
Telephone: (205)453-0020

NASA Resident Legal Office  
Mail Code: 180-801  
4800 Oak Grove Drive  
Pasadena, California 91103  
Telephone: (213)354-2700

# PATENT LICENSING REGULATIONS

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

### 14 CFR Part 1245

#### Licensing of NASA Inventions

**AGENCY:** National Aeronautics and Space Administration.

**ACTION:** Interim regulation with comments requested.

**SUMMARY:** The National Aeronautics and Space Administration (NASA) is revising its patent licensing regulations to conform with Pub. L. 96-517. This interim regulation provides policies and procedures applicable to the licensing of federally owned inventions in the custody of the National Aeronautics and Space Administration; and implements Pub. L. 96-517. The object of this subpart is to use the patent system to promote the utilization of inventions arising from NASA supported research and development.

**EFFECTIVE DATE:** July 1, 1981. Comments must be received in writing by December 2, 1981. Unless a notice is published in the *Federal Register* after the comment period indicating changes to be made, this interim regulation shall become a final regulation.

**ADDRESS:** Mr. John G. Mannix, Director of Patent Licensing, GP-4, NASA, Washington, D.C. 20546.

**FOR FURTHER INFORMATION CONTACT:** Mr. John G. Mannix, (202) 755-3954.

#### SUPPLEMENTARY INFORMATION:

### PART 1245—PATENTS AND OTHER INTELLECTUAL PROPERTY RIGHTS

Subpart 2 of Part 1245 is revised to read as follows:

#### Subpart 2—Licensing of NASA Inventions

##### Sec.

- 1245.200 Scope of subpart.
- 1245.201 Policy and objective.
- 1245.202 Definitions.
- 1245.203 Authority to grant licenses.

#### Restrictions and Conditions

- 1245.204 All licenses granted under this subpart.

#### Types of Licenses

- 1245.205 Nonexclusive licenses.
- 1245.206 Exclusive and partially exclusive licenses.

#### Procedures

- 1245.207 Application for a license.
- 1245.208 Processing applications.
- 1245.209 Notice to Attorney General.
- 1245.210 Modification and termination of licenses.
- 1245.211 Appeals.
- 1245.212 Protection and administration of inventions.

- 1245.213 Transfer of custody.
- 1245.214 Confidentiality of information.

**Authority:** 35 U.S.C. Section 207 and 208, 94 Stat. 3023 and 3024.

#### Subpart 2—Licensing of NASA Inventions

##### § 1245.200 Scope of subpart.

This subpart prescribes the terms, conditions, and procedures upon which a NASA invention may be licensed. It does not affect licenses which (a) were in effect prior to July 1, 1981; (b) may exist at the time of the Government's acquisition of title to the invention, including those resulting from the allocation of rights to inventions made under Government research and development contracts; (c) are the result of an authorized exchange of rights in the settlement of patent disputes; or (d) are otherwise authorized by law or treaty.

##### § 1245.201 Policy and objective.

It is the policy and objective of this subpart to use the patent system to promote the utilization of inventions arising from NASA supported research and development.

##### § 1245.202 Definitions.

(a) "Federally owned invention" means an invention, plant, or design which is covered by a patent, or patent application in the United States, or a patent, patent application, plant variety protection, or other form of protection, in a foreign country, title to which has been assigned to or otherwise vested in the United States Government.

(b) "Federal agency" means an executive department, military department, Government corporation, or independent establishment, except the Tennessee Valley Authority, which has custody of a Federally owned invention.

(c) "NASA Invention" means a Federally owned invention with respect to which NASA maintains custody and administration, in whole or in part, of the right, title, or interest in such invention on behalf of the United States Government.

(d) "Small business firm" means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of these regulations, the size standard for small business concerns involved in Government procurement, contained in 13 CFR 121.3-8, and in subcontracting, contained in 13 CFR 121.3-12, will be used.

(e) "Practical application" means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to

operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are to the extent permitted by law or Government regulations available to the public on reasonable terms.

(f) "United States" means the United States of America, its territories and possessions, the District of Columbia, and the Commonwealth of Puerto Rico.

##### § 1245.203 Authority to grant licenses.

NASA inventions shall be made available for licensing as deemed appropriate in the public interest. NASA may grant nonexclusive, partially exclusive, or exclusive licenses thereto under this subpart on inventions in its custody.

#### Restrictions and Conditions

##### § 1245.204 All licenses granted under this subpart.

(a) *Restrictions.* (1) A license may be granted only if the applicant has supplied NASA with a satisfactory plan for development or marketing of the invention, or both, and with information about the applicant's capability to fulfill the plan.

(2) A license granting rights to use or sell under a NASA invention in the United States shall normally be granted only to a licensee who agrees that any products embodying the invention or produced through the use of the invention will be manufactured substantially in the United States.

(b) *Conditions.* Licenses shall contain such terms and conditions as NASA determines are appropriate for the protection of the interests of the Federal Government and the public and are not in conflict with law or this subpart. The following terms and conditions apply to any license:

(1) The duration of the license shall be for a period specified in the license agreement, unless sooner terminated in accordance with this subpart.

(2) The license may be granted for all or less than all fields of use of the invention or in specified geographical areas, or both.

(3) The license may extend to subsidiaries of the licensee or other parties if provided for in the license but shall be nonassignable without approval of NASA, except to the successor of that part of the licensee's business to which the invention pertains.

(4) The license may provide the licensee the right to grant sublicenses under the license, subject to the approval of NASA. Each sublicense shall make reference to the license, including the rights retained by the Government, and a copy of such

sublicense shall be furnished to NASA.

(5) The license shall require the licensee to carry out the plan for development or marketing of the invention, or both, to bring the invention to practical application within a period specified in the license, and to continue to make the benefits of the invention reasonably accessible to the public.

(6) The license shall require the licensee to report periodically on the utilization or efforts at obtaining utilization that are being made by the licensee, with particular reference to the plan submitted.

(7) All licenses shall normally require royalties or other consideration.

(8) Where an agreement is obtained pursuant to § 1245.204(a)(2) that any products embodying the invention or produced through use of the invention will be manufactured substantially in the United States, the license shall recite such agreement.

(9) The license shall provide for the right of NASA to terminate the license, in whole or in part, if:

(i) NASA determines that the licensee is not executing the plan submitted with its request for a license and the licensee cannot otherwise demonstrate to the satisfaction of NASA that it has taken or can be expected to take within a reasonable time effective steps to achieve practical application of the invention;

(ii) NASA determines that such action is necessary to meet requirements for public use specified by Federal regulations issued after the date of the license and such requirements are not reasonably satisfied by the licensee;

(iii) The licensee has willfully made a false statement of or willfully omitted a material fact in the license application or in any report required by the license agreement; or

(iv) The licensee commits a substantial breach of a covenant or agreement contained in the license.

(10) The license may be modified or terminated, consistent with this subpart, upon mutual agreement of NASA and the licensee.

(11) Nothing relating to the grant of a license, nor the grant itself, shall be construed to confer upon any person any immunity from or defenses under the antitrust laws or from a charge of patent misuse, and the acquisition and use of rights pursuant to this subpart shall not be immunized from the operation of state or Federal law by reason of the source of the grant.

## Types of Licenses

### § 1245.205 Nonexclusive licenses.

#### (a) Availability of licenses.

Nonexclusive licenses may be granted under NASA inventions without publication of availability or notice of a prospective license.

(b) *Conditions.* In addition to the provisions of § 1245.204, the nonexclusive license may also provide that, after termination of a period specified in the license agreement, NASA may restrict the license to the fields of use or geographic areas, or both, in which the licensee has brought the invention to practical application and continues to make the benefits of the invention reasonably accessible to the public. However, such restriction shall be made only in order to grant an exclusive or partially exclusive license in accordance with this subpart.

### § 1245.206 Exclusive and partially exclusive licenses.

#### (a) Domestic licenses.

(1) *Availability of licenses.* Exclusive or partially exclusive licenses may be granted on NASA inventions: (i) 3 months after notice of the invention's availability has been announced in the Federal Register; or (ii) without such notice where NASA determines that expeditious granting of such a license will best serve the interests of the Federal Government and the public; and (iii) in either situation, specified in (a)(1)(i) or (ii) of this section only if:

(A) Notice of a prospective license, identifying the invention and the prospective licensee, has been published in the Federal Register, providing opportunity for filing written objections within a 60-day period;

(B) After expiration of the period in § 1245.206(a)(1)(iii)(A) and consideration of any written objections received during the period, NASA has determined that:

(1) The interests of the Federal Government and the public will best be served by the proposed license, in view of the applicant's intentions, plans, and ability to bring the invention to practical application or otherwise promote the invention's utilization by the public;

(2) The desired practical application has not been achieved, or is not likely expeditiously to be achieved, under any nonexclusive license which has been granted, or which may be granted, on the invention;

(3) Exclusive or partially exclusive licensing is a reasonable and necessary incentive to call forth the investment of risk capital and expenditures to bring the invention to practical application or

otherwise promote the invention's utilization by the public; and

(4) The proposed terms and scope of exclusivity are not greater than reasonably necessary to provide the incentive for bringing the invention to practical application or otherwise promote the invention's utilization by the public;

(C) NASA has not determined that the grant of such license will tend substantially to lessen competition or result in undue concentration in any section of the country in any line of commerce to which the technology to be licensed relates, or to create or maintain other situations inconsistent with the antitrust laws; and

(D) NASA has given first preference to any small business firms submitting plans that are determined by the agency to be within the capabilities of the firms and as equally likely, if executed, to bring the invention to practical application as any plans submitted by applicants that are not small business firms.

(2) *Conditions.* In addition to the provisions of § 1245.204, the following terms and conditions apply to domestic exclusive and partially exclusive licenses:

(i) The license shall be subject to the irrevocable, royalty-free right of the Government of the United States to practice and have practiced the invention on behalf of the United States and on behalf of any foreign government or international organization pursuant to any existing or future treaty or agreement with the United States.

(ii) The license shall reserve to NASA the right to require the licensee to grant sublicenses to responsible applicants, on reasonable terms, when necessary to fulfill health or safety needs.

(iii) The license shall be subject to any licenses in force at the time of the grant of the exclusive or partially exclusive license.

(iv) The licensee may grant the licensee the right of enforcement of the licensed patent pursuant to the provisions of Chapter 29 of Title 35, United States Code, or other statutes, as determined appropriate in the public interest.

#### (b) Foreign licenses.

(1) *Availability of licenses.* Exclusive or partially exclusive licenses may be granted on a NASA invention covered by a foreign patent, patent application, or other form of protection, provided that:

(i) Notice of a prospective license, identifying the invention and prospective licensee, has been published in the Federal Register, providing opportunity for filing written objections



# PATENT LICENSING REGULATIONS

within a 60-day period and following consideration of such objections;

(ii) NASA has considered whether the interests of the Federal Government or United States industry in foreign commerce will be enhanced; and

(iii) NASA has not determined that the grant of such license will tend substantially to lessen competition or result in undue concentration in any section of the United States in any line of commerce to which the technology to be licensed relates, or to create or maintain other situations inconsistent with antitrust laws.

(2) *Conditions.* In addition to the provisions of § 1245.204, the following terms and conditions apply to foreign exclusive and partially exclusive licenses:

(i) The license shall be subject to the irrevocable, royalty-free right of the Government of the United States to practice and have practiced the invention on behalf of the United States and on behalf of any foreign government or international organization pursuant to any existing or future treaty or agreement with the United States.

(ii) The license shall be subject to any licenses in force at the time of the grant of the exclusive or partially exclusive license.

(iii) The license may grant the licensee the right to take any suitable and necessary actions to protect the licensed property, on behalf of the Federal Government.

(c) *Record of determinations.* NASA shall maintain a record of determinations to grant exclusive or partially exclusive licenses.

## Procedures

### § 1245.207 Application for a license.

An application for a license should be addressed to the Patent Counsel at the NASA installation having responsibility for the invention and shall normally include:

(a) Identification of the invention for which the license is desired, including the patent application serial number or patent number, title, and date, if known;

(b) Identification of the type of license for which the application is submitted;

(c) Name and address of the person, company, or organization applying for the license and the citizenship or place of incorporation of the applicant;

(d) Name, address, and telephone number of representative of applicant to whom correspondence should be sent;

(e) Nature and type of applicant's business, identifying products or services which the applicant has successfully commercialized, and

approximate number of applicant's employees;

(f) Source of information concerning the availability of a license on the invention;

(g) A statement indicating whether applicant is a small business firm as defined in § 1245.202(c);

(h) A detailed description of applicant's plan for development or marketing of the invention, or both, which should include:

(1) A statement of the time, nature and amount of anticipated investment of capital and other resources which applicant believes will be required to bring the invention to practical application;

(2) A statement as to applicant's capability and intention to fulfill the plan, including information regarding manufacturing, marketing, financial, and technical resources;

(3) A statement of the fields of use for which applicant intends to practice the invention; and

(4) A statement of the geographic areas in which applicant intends to manufacture any products embodying the invention and geographic areas where applicant intends to use or sell the invention, or both;

(i) Identification of licenses previously granted to applicant under Federally owned inventions;

(j) A statement containing applicant's best knowledge of the extent to which the invention is being practiced by private industry or Government, or both, or is otherwise available commercially; and

(k) Any other information which applicant believes will support a determination to grant the license to applicant.

### § 1245.208 Processing applications.

(a) Applications for licenses will be initially reviewed by the Patent Counsel of the NASA installation having responsibility for the invention. The Patent Counsel shall make a preliminary recommendation to the Director of Licensing, NASA Headquarters, whether to: (1) grant the license as requested, (2) grant the license with modification after negotiation with the licensee, or (3) deny the license. The Director of Licensing shall review the preliminary recommendation of the Patent Counsel and make a final recommendation to the NASA Assistant General Counsel for Patent Matters. Such review and final recommendation may include, and be based on, any additional information obtained from applicant and other sources that the Patent Counsel and the Director of Licensing deem relevant to

the license requested. The determination to grant or deny the license shall be made by the Assistant General Counsel for Patent Matters based on the final recommendation of the Director of Licensing.

(b) When notice of a prospective exclusive or partially exclusive license is published in the Federal Register in accordance with § 1245.206(a)(1)(iii)(A) or § 1245.206(b)(1)(i), any written objections received in response thereto will be considered by the Director of Licensing in making the final recommendation to the Assistant General Counsel for Patent Matters.

(c) If the requested license, including any negotiated modifications, is denied by the Assistant General Counsel for Patent Matters, the applicant may request reconsideration by filing a written request for reconsideration within 30 days after receiving notice of denial. This 30-day period may be extended for good cause.

(d) In addition to, or in lieu of requesting reconsideration, the applicant may also appeal the denial of the license in accordance with § 1245.211.

### § 1245.209 Notice to Attorney General.

A copy of the notice provided for in §§ 1245.206(a)(1)(iii)(A), and 1245.206(b)(1)(i) will be sent to the Attorney General.

### § 1245.210 Modification and termination of licenses.

Before modifying or terminating a license, other than by mutual agreement, NASA shall furnish the licensee and any sublicensee of record a written notice of intention to modify or terminate the license, and the licensee and any sublicensee shall be allowed 30 days after such notice to remedy any breach of the license or show cause why the license should not be modified or terminated.

### § 1245.211 Appeals.

(a) The following parties may appeal to the NASA Administrator or designee any decision or determination concerning the grant, denial, interpretation, modification, or termination of a license:

(1) A person whose application for a license has been denied;

(2) A licensee whose license has been modified or terminated, in whole or in part; or

(3) A person who timely filed a written objection in response to the notice required by

§§ 1245.206(a)(1)(iii)(A) or

## PATENT LICENSING REGULATIONS

1245.206(b)(1)(i) and who can demonstrate to the satisfaction of NASA that such person may be damaged by the Agency action.

(b) Written notice of appeal must be filed within 30 days (or such other time as may be authorized for good cause shown) after receiving notice of the adverse decision or determination; including, an adverse decision following the request for reconsideration under § 1245.208(c). The notice of appeal, along with all supporting documentation should be addressed to the Administrator, National Aeronautics and Space Administration, Washington, DC 20546. Should the appeal raise a genuine dispute over material facts, fact-finding will be conducted by the NASA Inventions and Contributions Board. The person filing the appeal shall be

afforded an opportunity to be heard and to offer evidence in support of the appeal. The Chairperson of the Inventions and Contributions Board shall prepare written findings of fact and transmit them to the Administrator or designee. The decision on the appeal shall be made by the NASA Administrator or designee. There is no further right of administrative appeal from the decision of the Administrator or designee.

### § 1245.212 Protection and administration of inventions.

NASA may take any suitable and necessary steps to protect and administer rights to NASA inventions, either directly or through contract.

### § 1245.213 Transfer of custody.

NASA having custody of certain Federally owned inventions may transfer custody and administration in whole or in part, to another Federal agency, of the right, title, or interest in any such invention.

### § 1245.214 Confidentiality of information.

Title 35, United States Code, section 209, provides that any plan submitted pursuant to § 1245.207(h) and any report required by § 1245.204(b)(6) may be treated by NASA as commercial and financial information obtained from a person and privileged and confidential and not subject to disclosure under section 552 of Title 5 of the United States Code.

James M. Beggs,  
Administrator.

October 15, 1981.

[FR Doc. 81-31809 Filed 10-30-81; 8:45 am]

BILLING CODE 7510-01-M

## FOREIGN PATENT LICENSING REGULATIONS

Selected NASA inventions are also available for licensing in countries other than the United States in accordance with the NASA Foreign Patent Licensing Regulation (14 C.F.R. 1245.4), a copy of which is available from any NASA Patent Counsel. For abstracts of NASA-owned inventions available for licensing in countries other than the United States, see NASA SP-7038, "Significant NASA Inventions Available for Licensing in Countries Other Than the United States." A copy of this NASA publication is available from NASA Headquarters, Code GP-4, Washington, D.C., 20546

# Subject Categories

(1969 - 1973)

## 01 Aerodynamics

Includes aerodynamics of bodies, combinations, internal flow in ducts and turbomachinery; wings, rotors, and control surfaces. For applications see: 02 Aircraft and 32 Space Vehicles. For related information see also: 12 Fluid Mechanics; and 33 Thermodynamics and Combustion.

## 02 Aircraft

Includes fixed-wing airplanes, helicopters, gliders, balloons, ornithopters, etc.; and specific types of complete aircraft (e.g., ground effect machines, STOL, and VTOL); flight tests; operating problems (e.g., sonic boom); safety and safety devices; economics; and stability and control. For basic research see: 01 Aerodynamics. For related information see also: 31 Space Vehicles; and 32 Structural Mechanics.

## 03 Auxiliary Systems

Includes fuel cells, energy conversion cells, and solar cells; auxiliary gas turbines; hydraulic, pneumatic and electrical systems; actuators; and inverters. For related information see also: 09 Electronic Equipment; 22 Nuclear Engineering; and 28 Propulsion Systems.

## 04 Biosciences

Includes aerospace medicine, exobiology, radiation effects on biological systems; physiological and psychological factors. For related information see also: 05 Biotechnology.

## 05 Biotechnology

Includes life support systems, human engineering; protective clothing and equipment; crew training and evaluation, and piloting. For related information see also: 04 Biosciences.

## 06 Chemistry

Includes chemical analysis and identification (e.g., spectroscopy). For applications see: 17 Materials, Metallic; 18 Materials, Nonmetallic; and 27 Propellants.

## 07 Communications

Includes communications equipment and techniques; noise; radio and communications blackout; modulation telemetry; tracking radar and optical observation; and wave propagation. For basic research see: 23 Physics, General; and 21 Navigation.

## 08 Computers

Includes computer operation and programming; and data processing. For applications, see specific categories. For related information see also: 19 Mathematics.

## 09 Electronic Equipment

Includes electronic test equipment and maintainability; component parts, e.g., electron tubes, tunnel diodes, transistors, integrated circuitry; microminiaturization. For basic research see: 10 Electronics. For related information see also: 07 Communications and 21 Navigation.

## 10 Electronics

Includes circuit theory; and feedback and control theory. For applications see: 09 Electronic Equipment. For related information see specific Physics categories.

## 11 Facilities, Research and Support

Includes airports; lunar and planetary bases including associated vehicles; ground support systems; related logistics; simulators; test facilities (e.g., rocket engine test stands, shock tubes, and wind tunnels); test ranges; and tracking stations.

## 12 Fluid Mechanics

Includes boundary-layer flow; compressible flow; gas dynamics; hydrodynamics; and turbulence. For related information see also: 01 Aerodynamics; and 33 Thermodynamics and Combustion.

## 13 Geophysics

Includes aeronomy; upper and lower atmosphere studies; oceanography; cartography; and geodesy. For related information see also: 20 Meteorology; 29 Space Radiation; and 30 Space Sciences.

## 14 Instrumentation and Photography

Includes design, installation, and testing of instrumentation systems; gyroscopes; measuring instruments and gages; recorders, transducers; aerial photography; and telescopes and cameras.

## 15 Machine Elements and Processes

Includes bearings, seals, pumps, and other mechanical equipment; lubrication, friction, and wear; manufacturing processes and quality control; reliability; drafting; and materials fabrication, handling, and inspection.

## 16 Masers

Includes applications of masers and lasers. For basic research see: 26 Physics, Solid-State.

## 17 Materials, Metallic

Includes cermets; corrosion; physical and mechanical properties of materials; metallurgy; and applications as structural materials. For basic research see: 06 Chemistry. For related information see also: 18 Materials, Nonmetallic; and 32 Structural Mechanics.

## 18 Materials, Nonmetallic

Includes corrosion; physical and mechanical properties of materials (e.g., plastics); and elastomers, hydraulic fluids, etc. For basic research see: 06 Chemistry. For related information see also: 17 Materials, Metallic; 27 Propellants; and 32 Structural Mechanics.



**19 Mathematics**

Includes calculation methods and theory; and numerical analysis. For applications see specific categories. For related information see also: 08 Computers.

**20 Meteorology**

Includes climatology; weather forecasting; and visibility studies. For related information see also: 13 Geophysics; and 30 Space Sciences.

**21 Navigation**

Includes guidance; autopilots; star and planet tracking; inertial platforms; and air traffic control. For related information see also: 07 Communications.

**22 Nuclear Engineering**

Includes nuclear reactors and nuclear heat sources used for propulsion and auxiliary power. For basic research see: 24 Physics, Atomic, Molecular, and Nuclear. For related information see also: 03 Auxiliary Systems; and 28 Propulsion Systems.

**23 Physics, General**

Includes acoustics, cryogenics, mechanics, and optics. For astrophysics see: 30 Space Sciences. For geophysics and related information see also: 13 Geophysics, 20 Meteorology, and 29 Space Radiation.

**24 Physics, Atomic, Molecular, and Nuclear**

Includes atomic, molecular and nuclear physics. For applications see: 22 Nuclear Engineering. For related information see also: 29 Space Radiation.

**25 Physics, Plasma**

Includes magnetohydrodynamics. For applications see: 28 Propulsion Systems.

**26 Physics, Solid-State**

Includes semiconductor theory; and superconductivity. For applications see: 16 Masers. For related information see also: 10 Electronics.

**27 Propellants**

Includes fuels; igniters; and oxidizers. For basic research see: 06 Chemistry; and 33 Thermodynamics and Combustion. For related information see also 28 Propulsion Systems.

**28 Propulsion Systems**

Includes air breathing, electric, liquid, solid, and magnetohydrodynamic propulsion. For nuclear propulsion see: 22 Nuclear Engineering. For basic research see: 23 Physics, General; and 33 Thermodynamics and Combustion. For applications see: 31 Space Vehicles. For related information see also: 27 Propellants.

**29 Space Radiation**

Includes cosmic radiation; solar flares; solar radiation; and Van Allen radiation belts. For related information see also: 13 Geophysics, and 24 Physics, Atomic, Molecular, and Nuclear.

**30 Space Sciences**

Includes astronomy and astrophysics; cosmology; lunar and planetary flight and exploration; and theoretical analysis of orbits and trajectories. For related information see also: 11 Facilities, Research and Support; and 31 Space Vehicles.

**31 Space Vehicles**

Includes launch vehicles; manned space capsules; clustered and multistage rockets; satellites; sounding rockets and probes; and operating problems. For basic research see: 30 Space Sciences. For related information see also: 28 Propulsion Systems; and 32 Structural Mechanics.

**32 Structural Mechanics**

Includes structural element design and weight analysis; fatigue; thermal stress; impact phenomena; vibration; flutter; inflatable structures; and structural tests. For related information see also: 17 Materials, Metallic; and 18 Materials, Nonmetallic.

**33 Thermodynamics and Combustion**

Includes ablation, cooling, heating, heat transfer, thermal balance, and other thermal effects; and combustion theory. For related information see also: 12 Fluid Mechanics; and 27 Propellants.

**34 General**

Includes information of a broad nature related to industrial applications and technology, and to basic research; defense aspects; information retrieval; management; law and related legal matters; and legislative hearings and documents.

# TABLE OF CONTENTS

## Section 1 • Abstracts

### Subject Categories (1974 - )

#### AERONAUTICS

Includes aeronautics (general); aerodynamics; air transportation and safety; aircraft communications and navigation; aircraft design, testing and performance; aircraft instrumentation; aircraft propulsion and power; aircraft stability and control; and research and support facilities (air).

For related information see also *Astronautics*.

#### 01 AERONAUTICS (GENERAL)

#### 02 AERODYNAMICS

Includes aerodynamics of bodies, combinations, wings, rotors, and control surfaces; and internal flow in ducts and turbomachinery.

For related information see also *34 Fluid Mechanics and Heat Transfer*.

#### 03 AIR TRANSPORTATION AND SAFETY

Includes passenger and cargo air transport operations; and aircraft accidents.

For related information see also *16 Space Transportation* and *85 Urban Technology and Transportation*.

#### 04 AIRCRAFT COMMUNICATIONS AND NAVIGATION

Includes digital and voice communication with aircraft; air navigation systems (satellite and ground based); and air traffic control.

For related information see also *17 Spacecraft Communications, Command and Tracking* and *32 Communications*.

#### 05 AIRCRAFT DESIGN, TESTING AND PERFORMANCE

Includes aircraft simulation technology.

For related information see also *18 Spacecraft Design, Testing and Performance* and *39 Structural Mechanics*.

#### 06 AIRCRAFT INSTRUMENTATION

Includes cockpit and cabin display devices; and flight instruments.

For related information see also *19 Spacecraft Instrumentation* and *35 Instrumentation and Photography*.

#### 07 AIRCRAFT PROPULSION AND POWER

Includes prime propulsion systems and systems components, e.g., gas turbine engines and compressors; and on-board auxiliary power plants for aircraft.

For related information see also *20 Spacecraft Propulsion and Power*, *28 Propellants and Fuels*, and *44 Energy Production and Conversion*.

#### 08 AIRCRAFT STABILITY AND CONTROL

Includes aircraft handling qualities; piloting; flight controls; and autopilots.

#### 09 RESEARCH AND SUPPORT FACILITIES (AIR)

Includes airports, hangars and runways; aircraft repair and overhaul facilities; wind tunnels; shock tube facilities; and engine test blocks.

For related information see also *14 Ground Support Systems and Facilities (Space)*.

## ASTRONAUTICS

Includes astronautics (general); astrodynamics; ground support systems and facilities (space); launch vehicles and space vehicles; space transportation; spacecraft communications, command and tracking; spacecraft design, testing and performance; spacecraft instrumentation; and spacecraft propulsion and power.

For related information see also *Aeronautics*.

#### 12 ASTRONAUTICS (GENERAL)

For extraterrestrial exploration see *91 Lunar and Planetary Exploration*.

#### 13 ASTRODYNAMICS

Includes powered and free-flight trajectories; and orbit and launching dynamics.

#### 14 GROUND SUPPORT SYSTEMS AND FACILITIES (SPACE)

Includes launch complexes, research and production facilities; ground support equipment, e.g., mobile transporters; and simulators.

For related information see also *09 Research and Support Facilities (Air)*.

#### 15 LAUNCH VEHICLES AND SPACE VEHICLES

Includes boosters; manned orbital laboratories; reusable vehicles; and space stations.

#### 16 SPACE TRANSPORTATION

Includes passenger and cargo space transportation, e.g., shuttle operations; and rescue techniques.

For related information see also *03 Air Transportation and Safety* and *85 Urban Technology and Transportation*.

#### 17 SPACECRAFT COMMUNICATION, COMMAND AND TRACKING

Includes telemetry; space communications networks; astronavigation; and radio blackout.

For related information see also *04 Aircraft Communications and Navigation* and *32 Communications*.

#### 18 SPACECRAFT DESIGN, TESTING AND PERFORMANCE

Includes spacecraft thermal and environmental control; and attitude control.

For life support systems see *54 Man/System Technology and Life Support*. For related information see also *05 Aircraft Design, Testing and Performance* and *39 Structural Mechanics*.

#### 19 SPACECRAFT INSTRUMENTATION

For related information see also *06 Aircraft Instrumentation* and *35 Instrumentation and Photography*.

#### 20 SPACECRAFT PROPULSION AND POWER

Includes main propulsion systems and components, e.g., rocket engines; and spacecraft auxiliary power sources.

For related information see also *07 Aircraft Propulsion and Power*, *28 Propellants and Fuels*, and *44 Energy Production and Conversion*.

## CHEMISTRY AND MATERIALS

Includes chemistry and materials (general); composite materials; inorganic and physical chemistry; metallic materials; nonmetallic materials; and propellants and fuels.

### 23 CHEMISTRY AND MATERIALS (GENERAL)

Includes biochemistry and organic chemistry.

### 24 COMPOSITE MATERIALS

Includes laminates.

### 25 INORGANIC AND PHYSICAL CHEMISTRY

Includes chemical analysis, e.g., chromatography; combustion theory; electrochemistry; and photochemistry.

For related information see also 77 *Thermodynamics and Statistical Physics*.

### 26 METALLIC MATERIALS

Includes physical, chemical, and mechanical properties of metals, e.g., corrosion; and metallurgy.

### 27 NONMETALLIC MATERIALS

Includes physical, chemical, and mechanical properties of plastics, elastomers, lubricants, polymers, textiles, adhesives, and ceramic materials.

### 28 PROPELLANTS AND FUELS

Includes rocket propellants, igniters, and oxidizers; storage and handling; and aircraft fuels.

For related information see also 07 *Aircraft Propulsion and Power*, 20 *Spacecraft Propulsion and Power*, and 44 *Energy Production and Conversion*.

## ENGINEERING

Includes engineering (general); communications; electronics and electrical engineering; fluid mechanics and heat transfer; instrumentation and photography; lasers and masers; mechanical engineering; quality assurance and reliability; and structural mechanics.

For related information see also *Physics*.

### 31 ENGINEERING (GENERAL)

Includes vacuum technology; control engineering; display engineering; and cryogenics.

### 32 COMMUNICATIONS

Includes land and global communications; communications theory; and optical communications.

For related information see also 04 *Aircraft Communications and Navigation* and 17 *Spacecraft Communications, Command and Tracking*.

### 33 ELECTRONICS AND ELECTRICAL ENGINEERING

Includes test equipment and maintainability; components, e.g., tunnel diodes and transistors; micro-miniaturization; and integrated circuitry.

For related information see also 60 *Computer Operations and Hardware* and 76 *Solid-State Physics*.

### 34 FLUID MECHANICS AND HEAT TRANSFER

Includes boundary layers; hydrodynamics; fluidics; mass transfer; and ablation cooling.

For related information see also 02 *Aerodynamics* and 77 *Thermodynamics and Statistical Physics*.

### 35 INSTRUMENTATION AND PHOTOGRAPHY

Includes remote sensors; measuring instruments and gages; detectors; cameras and photographic supplies; and holography.

For aerial photography see 43 *Earth Resources*. For related information see also 06 *Aircraft Instrumentation* and 19 *Spacecraft Instrumentation*.

### 36 LASERS AND MASERS

Includes parametric amplifiers.

### 37 MECHANICAL ENGINEERING

Includes auxiliary systems (non-power); machine elements and processes; and mechanical equipment.

### 38 QUALITY ASSURANCE AND RELIABILITY

Includes product sampling procedures and techniques; and quality control.

### 39 STRUCTURAL MECHANICS

Includes structural element design and weight analysis; fatigue; and thermal stress.

For applications see 05 *Aircraft Design, Testing and Performance* and 18 *Spacecraft Design, Testing and Performance*.

## GEOSCIENCES

Includes geosciences (general); earth resources; energy production and conversion; environment pollution; geophysics; meteorology and climatology; and oceanography.

For related information see also *Space Sciences*.

### 42 GEOSCIENCES (GENERAL)

### 43 EARTH RESOURCES

Includes remote sensing of earth resources by aircraft and spacecraft; photogrammetry; and aerial photography.

For instrumentation see 35 *Instrumentation and Photography*.

### 44 ENERGY PRODUCTION AND CONVERSION

Includes specific energy conversion systems, e.g., fuel cells and batteries; global sources of energy; fossil fuels; geophysical conversion; hydroelectric power; and wind power.

For related information see also 07 *Aircraft Propulsion and Power*, 20 *Spacecraft Propulsion and Power*, 28 *Propellants and Fuels*, and 85 *Urban Technology and Transportation*.

### 45 ENVIRONMENT POLLUTION

Includes air, noise, thermal and water pollution; environment monitoring; and contamination control.

### 46 GEOPHYSICS

Includes aeronomy; upper and lower atmosphere studies; ionospheric and magnetospheric physics; and geomagnetism.

For space radiation see 93 *Space Radiation*.

### 47 METEOROLOGY AND CLIMATOLOGY

Includes weather forecasting and modification.

### 48 OCEANOGRAPHY

Includes biological, dynamic and physical oceanography; and marine resources.



## **LIFE SCIENCES**

Includes sciences (general); aerospace medicine; behavioral sciences; man/system technology and life support; and planetary biology.

### **51 LIFE SCIENCES (GENERAL)**

Includes genetics.

### **52 AEROSPACE MEDICINE**

Includes physiological factors; biological effects of radiation; and weightlessness.

### **53 BEHAVIORAL SCIENCES**

Includes psychological factors; individual and group behavior; crew training and evaluation; and psychiatric research.

### **54 MAN/SYSTEM TECHNOLOGY AND LIFE SUPPORT**

Includes human engineering; biotechnology; and space suits and protective clothing.

### **55 PLANETARY BIOLOGY**

Includes exobiology; and extraterrestrial life.

## **MATHEMATICAL AND COMPUTER SCIENCES**

Includes mathematical and computer sciences (general); computer operations and hardware; computer programming and software; computer systems; cybernetics; numerical analysis; statistics and probability; systems analysis; and theoretical mathematics.

### **59 MATHEMATICAL AND COMPUTER SCIENCES (GENERAL)**

### **60 COMPUTER OPERATIONS AND HARDWARE**

Includes computer graphics and data processing.  
For components see 33 *Electronics and Electrical Engineering*.

### **61 COMPUTER PROGRAMMING AND SOFTWARE**

Includes computer programs, routines, and algorithms.

### **62 COMPUTER SYSTEMS**

Includes computer networks.

### **63 CYBERNETICS**

Includes feedback and control theory.  
For related information see also 54 *Man/System Technology and Life Support*.

### **64 NUMERICAL ANALYSIS**

Includes iteration, difference equations, and numerical approximation.

### **65 STATISTICS AND PROBABILITY**

Includes data sampling and smoothing; Monte Carlo method; and stochastic processes.

### **66 SYSTEMS ANALYSIS**

Includes mathematical modeling; network analysis; and operations research.

## **67 THEORETICAL MATHEMATICS**

Includes topology and number theory.

## **PHYSICS**

Includes physics (general); acoustics; atomic and molecular physics; nuclear and high-energy physics; optics; plasma physics; solid-state physics; and thermodynamics and statistical physics.

For related information see also *Engineering*.

### **70 PHYSICS (GENERAL)**

For geophysics see 46 *Geophysics*. For astrophysics see 90 *Astrophysics*. For solar physics see 92 *Solar Physics*.

### **71 ACOUSTICS**

Includes sound generation, transmission, and attenuation.

For noise pollution see 45 *Environment Pollution*.

### **72 ATOMIC AND MOLECULAR PHYSICS**

Includes atomic structure and molecular spectra.

### **73 NUCLEAR AND HIGH-ENERGY PHYSICS**

Includes elementary and nuclear particles; and reactor theory.

For space radiation see 93 *Space Radiation*.

### **74 OPTICS**

Includes light phenomena.

### **75 PLASMA PHYSICS**

Includes magnetohydrodynamics and plasma fusion.

For ionospheric plasmas see 46 *Geophysics*. For space plasmas see 90 *Astrophysics*.

### **76 SOLID-STATE PHYSICS**

Includes superconductivity.  
For related information see also 33 *Electronics and Electrical Engineering* and 36 *Lasers and Masers*.

### **77 THERMODYNAMICS AND STATISTICAL PHYSICS**

Includes quantum mechanics; and Bose and Fermi statistics.

For related information see also 25 *Inorganic and Physical Chemistry* and 34 *Fluid Mechanics and Heat Transfer*.

## **SOCIAL SCIENCES**

Includes social sciences (general); administration and management; documentation and information science; economics and cost analysis; law and political science; and urban technology and transportation.

### **80 SOCIAL SCIENCES (GENERAL)**

Includes educational matters.

### **81 ADMINISTRATION AND MANAGEMENT**

Includes management planning and research.

## **82 DOCUMENTATION AND INFORMATION SCIENCE**

Includes information storage and retrieval technology; micrography; and library science.

For computer documentation see *61 Computer Programming and Software*.

## **83 ECONOMICS AND COST ANALYSIS**

Includes cost effectiveness studies.

## **84 LAW AND POLITICAL SCIENCE**

Includes space law; international law; international cooperation; and patent policy.

## **85 URBAN TECHNOLOGY AND TRANSPORTATION**

Includes applications of space technology to urban problems; technology transfer; technology assessment; and surface and mass transportation.

For related information see *03 Air Transportation and Safety*, *16 Space Transportation*, and *44 Energy Production and Conversion*.

## **SPACE SCIENCES**

Includes space sciences (general); astronomy; astrophysics; lunar and planetary exploration; solar physics; and space radiation.

For related information see also *Geosciences*.

## **88 SPACE SCIENCES (GENERAL)**

### **89 ASTRONOMY**

Includes radio and gamma-ray astronomy; celestial mechanics; and astrometry.

### **90 ASTROPHYSICS**

Includes cosmology; and interstellar and interplanetary gases and dust.

### **91 LUNAR AND PLANETARY EXPLORATION**

Includes planetology; and manned and unmanned flights.

For spacecraft design see *18 Spacecraft Design, Testing and Performance*. For space stations see *15 Launch Vehicles and Space Vehicles*.

### **92 SOLAR PHYSICS**

Includes solar activity, solar flares, solar radiation and sunspots.

### **93 SPACE RADIATION**

Includes cosmic radiation; and inner and outer earth's radiation belts.

For biological effects of radiation see *52 Aerospace Medicine*. For theory see *73 Nuclear and High-Energy Physics*.

## **GENERAL**

### **99 GENERAL**

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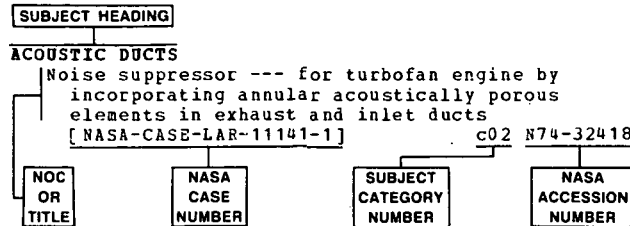
# SUBJECT INDEX

## NASA PATENT ABSTRACTS BIBLIOGRAPHY

JULY 1982

### Section 2

#### Typical Subject Index Listing



The subject heading is the key to the subject content of the document. A brief description of the document, e.g., title, title plus a title extension, or Notation of Content (NOC), is included for each subject entry to indicate the subject heading context; these descriptions are arranged under each subject heading in ascending accession number order. The NASA Case Number serves as the prime access number to the patent documents. The Subject Category Number indicates the category in Section 1 (Abstracts) in which the patent citation and abstract are located. The NASA accession number denotes the number by which the citation is identified within the subject category.

## A

### ABILITIES

Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c54 N81-15699

### ABLATION

Transpirationally cooled heat ablation system for interplanetary spacecraft reentry shielding  
[NASA-CASE-XMS-02677] c31 N70-42075

Hypersonic test facility for studying ablation in models under high pressure and high temperature  
[NASA-CASE-XLA-00378] c11 N71-15925

Design of hypersonic test facility for ablation tests and performance tests of vehicles under conditions of high temperature and pressure  
[NASA-CASE-XLA-05378] c11 N71-21475

Ablation sensor for measuring char layer recession rate using electric wires  
[NASA-CASE-XLA-01794] c33 N71-21586

Ablation sensor for measuring surface ablation rate of material on vehicles entering earth's atmosphere on entry into planetary atmospheres  
[NASA-CASE-XLA-01791] c14 N71-22991

Ablative system with liquid carrying ablative material bodies and forming self-replacing ablative surface  
[NASA-CASE-LEW-10359] c33 N72-25911

### ABLATIVE MATERIALS

Filling honeycomb matrix with deaerated paste filler  
[NASA-CASE-XMS-01108] c15 N69-24322

Sensor device with switches for measuring surface recession of charring and noncharring ablators  
[NASA-CASE-XLA-01781] c14 N69-39975

Vacuum method for molding thermosetting compounds used as ablative materials  
[NASA-CASE-XLA-01091] c15 N71-10672

Ablative resins used for retarding regression in ablative material  
[NASA-CASE-XLE-05913] c33 N71-14032

Design, development, and characteristics of ablation structures  
[NASA-CASE-XMS-01816] c33 N71-15623

Method and apparatus for fabrication of heat insulating and ablative reentry structure  
[NASA-CASE-XMS-02009] c33 N71-20834

Production and application of sprayable fiber reinforced ablation material  
[NASA-CASE-XLA-04251] c18 N71-26100

Ablative heat shield for protection from aerodynamic heating of reentry spacecraft

[NASA-CASE-MSC-12143-1] c33 N72-17947

Ablative system with liquid carrying ablative material bodies and forming self-replacing ablative surface

[NASA-CASE-LEW-10359] c33 N72-25911

Carrier liquid system containing bodies of ablative material

[NASA-CASE-LEW-10359-2] c33 N73-25952

Ablation article and surface for analyzing flow transition on ablative surface

[NASA-CASE-LAR-10439-1] c33 N73-27796

Dual measurement ablation sensor

[NASA-CASE-LAR-10105-1] c34 N74-15652

Sprayable low density ablator and application process

[NASA-CASE-MFS-23506-1] c24 N78-24290

Intumescent-ablator coatings using endothermic fillers

[NASA-CASE-ARC-11043-1] c24 N78-27180

Cork-resin ablative insulation for complex surfaces and method for applying the same

[NASA-CASE-MFS-23626-1] c24 N80-26388

Controlled overspray spray nozzle

[NASA-CASE-MFS-25139-1] c34 N82-13376

### ABORT APPARATUS

Coupling device for linear shaped charge for space vehicle abort system  
[NASA-CASE-XLA-00189] c33 N70-36846

### ABRASION RESISTANCE

Zinc dust formulation for abrasion resistant steel coatings

[NASA-CASE-GSC-10361-1] c18 N72-23581

Process for producing a well-adhered durable optical coating on an optical plastic substrate

--- abrasion resistant polymethyl methacrylate lenses

[NASA-CASE-ARC-11039-1] c74 N78-32854

Sandblasting nozzle

[NASA-CASE-NPO-13823-1] c37 N81-25371

### ABSORBENTS

Absorbent apparatus for separating gas from liquid-gas stream used in environmental control under zero gravity conditions

[NASA-CASE-XMS-01492] c05 N70-41297

Fluid flow control valve for regulating fluids in molecular quantities

[NASA-CASE-XLF-00703] c15 N71-15967

Noncontaminating swab with absorbent end covered with netted envelope to prevent egress of absorbent material

[NASA-CASE-MFS-18100] c15 N72-11390

Protein sterilization of firefly luciferase without denaturation

[NASA-CASE-GSC-10225-1] c06 N73-27086

Oil and fat absorbing polymers

[NASA-CASE-NPO-11609-2] c27 N77-31308

### ABSORBERS (EQUIPMENT)

Absorbent product and articles made therefrom --- for collection of human wastes

[NASA-CASE-MSC-18223-1] c24 N81-16127

### ABSORBERS (MATERIALS)

Broadband chokes and absorbers to reduce spurious radiation patterns of antenna array caused by support structures

[NASA-CASE-XMS-05303] c07 N69-27462

Analytical photoionization mass spectrometer with argon gas filter between light source and monochromator

[NASA-CASE-LAR-10180-1] c06 N71-13461

Development of filter system for control of outgas contamination in vacuum conditions using absorbent beds of molecular sieve zeolite, silica gel, and charcoal

[NASA-CASE-MFS-14711] c15 N71-26185

SUBJECT

- Development and characteristics of calorimeter with integral heat sink for maintenance of constant temperature  
[NASA-CASE-XMF-04208] c33 N71-29051
- Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c27 N77-30236
- Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c32 N80-14281
- ABSORPTION**
- Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c74 N78-17867
- ABSORPTION CROSS SECTIONS**
- Radiation source and detection system for measuring amount of liquid inside tanks independently of liquid configuration  
[NASA-CASE-MSC-12280] c27 N71-16348
- ABSORPTION SPECTRA**
- Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c25 N81-25159
- ABSORPTIVITY**
- Detector absorptivity measuring method and apparatus  
[NASA-CASE-LAR-10907-1] c35 N76-29551
- AC GENERATORS**
- Alternating current signal generator providing plurality of amplitude modulated output signals  
[NASA-CASE-XNP-05612] c09 N69-21468
- Improved alternator with windings of superconducting materials acting as permanent magnet  
[NASA-CASE-XLE-02824] c03 N69-39890
- Superconducting alternator design with cryogenic fluid for cooling windings below critical temperature  
[NASA-CASE-XLE-02823] c09 N71-23443
- ACCELERATION**
- Single grid accelerator system for electron bombardment type ion thruster  
[NASA-CASE-XLE-10453-2] c28 N73-27699
- ACCELERATION (PHYSICS)**
- Centrifuge mounted motion simulator with elevator mechanism  
[NASA-CASE-XAC-00399] c11 N70-34815
- Gravity device for accurate and rapid indication of relative gravity conditions aboard accelerating carrier  
[NASA-CASE-XMP-00424] c11 N70-38196
- Development of method for producing artificial gravity in manned spacecraft  
[NASA-CASE-XNP-02595] c31 N71-21881
- Vibration control of flexible bodies in steady accelerating environment  
[NASA-CASE-LAR-10106-1] c15 N71-27169
- G-load measuring and indicator apparatus --- for aircraft  
[NASA-CASE-ARC-10806] c06 N74-27872
- Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c09 N74-30597
- G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c35 N75-29381
- Method of forming frozen spheres in a force-free drop tower --- microballoons for inertial confinement fusion  
[NASA-CASE-NPO-14845-1] c31 N81-16328
- Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c54 N81-27806
- ACCELERATION PROTECTION**
- Astronaut restraint suit for high acceleration protection  
[NASA-CASE-XAC-00405] c05 N70-41819
- Conditioning suit for normal function of astronaut cardiovascular system in gravity environment  
[NASA-CASE-XLA-02898] c05 N71-20268
- ACCELERATION STRESSES (PHYSIOLOGY)**
- Development of method for producing artificial gravity in manned spacecraft  
[NASA-CASE-XNP-02595] c31 N71-21881
- ACCELERATION TOLERANCE**
- Electronic detection system for peak acceleration limits in vibrational testing of spacecraft components  
[NASA-CASE-NPO-10556] c14 N71-27185
- ACCELERATORS**
- Annular arc accelerator shock tube  
[NASA-CASE-NFO-13528-1] c09 N77-10071
- Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c35 N77-18417
- ACCELEROMETERS**
- Superconductive accelerometer employing variable force principle to determine acceleration of bodies  
[NASA-CASE-XMF-01099] c14 N71-15969
- Describing device for velocity control of electromechanical drive mechanism of scanning mirror of interferometer  
[NASA-CASE-XGS-03532] c14 N71-17627
- Omnidirectional liquid filled accelerometer design with liquid and housing temperature compensation  
[NASA-CASE-HCN-10780] c14 N71-30265
- Development of combined velocimeter and accelerometer based on color changes in liquid crystalline material subjected to shear stresses  
[NASA-CASE-ERC-10292] c14 N72-25410
- Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NPO-13044-1] c35 N74-15094
- Accelerometer telemetry system  
[NASA-CASE-ARC-10849-1] c17 N76-29347
- ACCEPTABILITY**
- Cross correlation anomaly detection system  
[NASA-CASE-NPC-13283] c38 N78-17395
- ACCEPTOR MATERIALS**
- III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c33 N76-31409
- ACCIDENT PREVENTION**
- CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c47 N81-16677
- ACCUMULATORS**
- Direct radiation cooling of linear beam collector tubes  
[NASA-CASE-XNP-09227] c15 N69-24319
- Regenerative cooling system for small rocket engine having restart capability and using noncryogenic hypergolic propellants  
[NASA-CASE-XLE-00685] c28 N70-41992
- Small plasma probe using tungsten wire collector in tubular shield  
[NASA-CASE-XLE-02578] c25 N71-20747
- Electrostatic charged particle collector containing stacked electrodes for microwave tube  
[NASA-CASE-LEW-11192-1] c09 N73-13208
- Accumulator  
[NASA-CASE-MFS-19287-1] c34 N77-30399
- Method for fabricating solar cells having integrated collector grits  
[NASA-CASE-LEW-12819-2] c44 N79-18444
- Urine collection device  
[NASA-CASE-MSC-16433-1] c52 N81-24711
- Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c52 N81-28740
- Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c52 N81-29763
- ACETALS**
- Synthesis of schiff bases for heat shields by acetal amine reactions  
[NASA-CASE-XMF-08652] c06 N71-11243
- ACETATES**
- Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c27 N78-33228
- ACETYLENE**
- Preparation of dicyanoacetylene and vinylidene copolymers using organic compounds  
[NASA-CASE-XNP-03250] c06 N71-23500
- ACOUSTIC ATTENUATION**
- Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c35 N76-15432
- ACOUSTIC DUCTS**
- Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c07 N74-32418
- ACOUSTIC IMPEDANCE**
- Method and transducer device for detecting presence of hydrogen gas  
[NASA-CASE-XMF-03873] c06 N69-39733

# ACOUSTIC LEVITATION

Method and apparatus for shaping and enhancing  
acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c71 N81-15767  
Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c71 N81-27887  
Systems for controlled acoustic rotation of  
objects  
[NASA-CASE-NPO-15522-1] c71 N82-11861  
Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c71 N82-12889

# ACOUSTIC MEASUREMENT

Instrumentation for measuring aircraft noise and  
sonic boom  
[NASA-CASE-LAR-11476-1] c07 N76-27232  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c71 N78-14867  
Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c35 N79-10390  
System for monitoring physical characteristics  
of fluids --- acoustic techniques  
[NASA-CASE-NPO-15400-1] c34 N81-24384

# ACOUSTIC PROPAGATION

Material suspension within an acoustically  
excited resonant chamber --- at near  
weightless conditions  
[NASA-CASE-NPO-13263-1] c12 N75-24774  
Resolution enhanced sound detecting  
apparatus  
[NASA-CASE-NPO-14134-1] c71 N79-23753

# ACOUSTIC PROPERTIES

Development of wind tunnel microphone structure  
to minimize effects of vibrations and  
eliminate unwanted signals in microphone output  
[NASA-CASE-XNP-00250] c11 N71-28779  
Acoustical transducer calibrating system  
including differential pressure activating  
device  
[NASA-CASE-PRC-10060-1] c14 N73-27379  
Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c35 N79-10390

# ACOUSTICAL HOLOGRAPHY

Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c38 N78-32447

# ACOUSTO-OPTICS

Acoustic vibration test apparatus for wiring  
harnesses  
[NASA-CASE-MSC-15158-1] c14 N72-17325  
Method and apparatus for background signal  
reduction in opto-acoustic absorption  
measurement  
[NASA-CASE-NPO-13683-1] c35 N77-14411  
Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c74 N78-17867  
Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c36 N80-24602  
Stark cell optoacoustic detection of constituent  
gases in sample  
[NASA-CASE-NPO-14143-1] c25 N81-14015  
Stark effect spectrophone for continuous  
absorption spectra monitoring --- a technique  
for gas analysis  
[NASA-CASE-NPO-15102-1] c25 N81-25159

# ACRYLATES

Ablative resins used for retarding regression in  
ablative material  
[NASA-CASE-XLE-05913] c33 N71-14032

# ACRYLIC RESINS

Method of carbonizing polyacrylonitrile fibers  
and resulting product  
[NASA-CASE-ARC-11261-1] c24 N81-29164

# ACRYLONITRILES

Method of carbonizing polyacrylonitrile fibers  
and resulting product  
[NASA-CASE-ARC-11261-1] c24 N81-29164

# ACTIVATED CARBON

Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c45 N82-11634

# ACTIVATION ENERGY

Heat activated emf cells with aluminum anode  
[NASA-CASE-LEW-11359] c03 N71-28579  
Heat activated cell with aluminum anode  
[NASA-CASE-LEW-11359-2] c03 N72-20034

# ACTIVE CONTROL

Linear magnetic bearings --- active magnetic  
suspension of armatures  
[NASA-CASE-GSC-12582-1] c37 N81-16469

# ACTUATOR DISKS

Cryogenic gyroscope housing --- with annular  
disks for gas spin-up

[NASA-CASE-MFS-21136-1] c35 N74-18323

# ACTUATORS

Electromechanical actuator and its use in rocket  
thrust control valve  
[NASA-CASE-XNP-05975] c15 N69-23185  
Power controlled bimetallic electromechanical  
actuator for accurate, timely, and reliable  
response to remote control signal  
[NASA-CASE-XNP-09776] c09 N69-39929  
Patent data on gas actuated bolt disconnect  
assembly  
[NASA-CASE-XLA-00326] c03 N70-34667  
Hermetically sealed explosive release mechanism  
for actuator device  
[NASA-CASE-XGS-00824] c15 N71-16078  
Burst diaphragm flow initiator for installation  
in short duration wind tunnels  
[NASA-CASE-MFS-12915] c11 N71-17600  
Hand controller operable about three  
respectively perpendicular axes and capable of  
actuating signal generators for attitude  
control devices  
[NASA-CASE-XMS-07487] c15 N71-23255  
Mechanical actuator wherein linear motion  
changes to rotational motion  
[NASA-CASE-XGS-04548] c15 N71-24045  
Hydraulic actuator design for space deployment  
of heat radiators  
[NASA-CASE-MSC-11817-1] c15 N71-26611  
Electromechanical control actuator system using  
double differential screws  
[NASA-CASE-ERC-10022] c15 N71-26635  
System to control speed of hydraulically movable  
members by limiting energy applied to  
actuators with hydraulic servo loop  
[NASA-CASE-ARC-10131-1] c15 N71-27754  
Zero power telemetry actuated switch for  
biomedical equipment  
[NASA-CASE-ARC-10105] c09 N72-17153  
Mechanically operated hand which can depress  
trigger using touch control device  
[NASA-CASE-MFS-20413] c15 N72-21463  
Hermetically sealed elbow actuator for use in  
severe environments  
[NASA-CASE-MFS-14710] c09 N72-22195  
Characteristics of lightweight actuator for  
imparting linear motion using elongated output  
shaft  
[NASA-CASE-NPO-11222] c15 N72-25456  
Rotary actuator for use in environments with no  
rolling and sliding friction  
[NASA-CASE-NFC-10244] c15 N72-26371  
Gas-operated actuator with cyclic motion of  
expansion chamber  
[NASA-CASE-NPO-11340] c15 N72-33477  
Redundant hydraulic control system for actuators  
with three main valve combination  
[NASA-CASE-MFS-20944] c15 N73-13466  
Actuator operated by electrolytic drive gas  
generator and evacuator  
[NASA-CASE-NPO-11369] c15 N73-13467  
Manual actuator --- for spacecraft exercising  
machines  
[NASA-CASE-MFS-21481-1] c37 N74-18127  
Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c37 N74-21060  
Dual output variable pitch turbofan actuation  
system  
[NASA-CASE-LEW-12419-1] c07 N77-14025  
Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c52 N77-14735  
Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c37 N77-19458  
Actuator mechanism  
[NASA-CASE-GSC-11883-2] c37 N78-31426  
Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c20 N80-18097  
Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c37 N81-17432  
Electrical servo actuator bracket --- fuel  
control valves on jet engines  
[NASA-CASE-PRC-11044-1] c37 N81-33483

# ADAPTERS

Camera adapter design for image magnification  
including lens and illuminator  
[NASA-CASE-XMF-03844-1] c14 N71-26474

# ADAPTIVE CONTROL

Self testing and repairing computer comprising  
control and diagnostic unit and rollback

- points for error correction  
[NASA-CASE-NFO-10567] c08 N71-24633
- Synchronous dc direct-drive system comprising multiple-loop hybrid control system controlling load directly connected to actuator  
[NASA-CASE-GSC-10065-1] c10 N71-27136
- Versatile ergometer with work load control  
[NASA-CASE-MFS-21109-1] c05 N73-27941
- Adaptive voting computer system  
[NASA-CASE-MS-C-13932-1] c62 N74-14920
- Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c33 N81-26358
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c33 N81-31480
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c33 N81-31481
- ADAPTIVE FILTERS**
- Adaptive notch filter, using modulation techniques for reversed phase noise signal  
[NASA-CASE-XMF-01892] c10 N71-22986
- ADAPTIVE OPTICS**
- Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c74 N81-24900
- ADDING CIRCUITS**
- Circuit diagram and operation of full binary adder  
[NASA-CASE-XGS-00689] c08 N70-34787
- Error correction circuitry for binary signal channels  
[NASA-CASE-XNP-03263] c09 N71-18843
- ADDITION RESINS**
- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c27 N81-29229
- ADDITIVES**
- Ammonium perchlorate composite propellant with organic Cu/II/ chelate catalytic additive  
[NASA-CASE-LAR-10173-1] c27 N71-14090
- Additive for zinc electrodes  
[NASA-CASE-LEW-13286-1] c44 N81-27597
- Sewage sludge additive  
[NASA-CASE-NFO-13877-1] c45 N82-11634
- ADDRESSING**
- Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NFO-15295-1] c60 N82-11785
- ADENOSINE TRIPHOSPHATE**
- Use of enzyme hexokinase and glucose to reduce inherent light levels of ATP in luciferase compositions  
[NASA-CASE-XGS-05533] c04 N69-27487
- Detection instrument for light emitted from ATP biochemical reaction  
[NASA-CASE-XGS-05534] c23 N71-16355
- Describing method for lyophilization of luciferase containing mixtures for use in life detection reactions  
[NASA-CASE-XGS-05532] c06 N71-17705
- Automatic device for assaying urine on bacterial adenosine triphosphate content  
[NASA-CASE-GSC-11169-2] c05 N73-32011
- Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c51 N77-22794
- ADHESION**
- Tool for mounting and removing studs with adhesive coated head portion  
[NASA-CASE-MFS-20299] c15 N72-11392
- Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c26 N81-16209
- ADHESION TESTS**
- Apparatus for determining quality of bond between high density material and low density material  
[NASA-CASE-MFS-13686] c15 N71-18132
- ADHESIVE BONDING**
- Fabrication of solar cell banks for attaching solar cells to base members or substrates  
[NASA-CASE-XNP-00826] c03 N71-20895
- Method for honeycomb panel bonding by thermosetting film adhesive with electrical heat means  
[NASA-CASE-XMF-01402] c18 N71-21651
- Etching aluminum alloys with aqueous solution containing sulfuric acid, hydrofluoric acid, and an alkali metal dischromate for adhesive bonding  
[NASA-CASE-XMF-02303] c17 N71-23828
- Adhesive spray process for attaching biomedical skin electrodes  
[NASA-CASE-XFR-07658-1] c05 N71-26293
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c37 N75-15992
- Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c37 N77-11397
- Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NFO-13764-1] c27 N78-17215
- Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c34 N78-18355
- Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MS-C-12619-2] c27 N79-12221
- Surface finishing  
[NASA-CASE-MS-C-12631-3] c27 N81-14077
- Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-13359-1] c27 N81-24265
- ADHESIVES**
- Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c27 N75-29263
- Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c27 N78-17205
- Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c27 N80-16158
- Thermal control coatings based on trialkoxysilane hydrolyzate binders --- tolerance to ultraviolet radiation in vacuum  
[NASA-CASE-MFS-25620-1] c24 N82-11118
- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c27 N82-11206
- ADJUSTING**
- Centering device with ultrafine adjustment for use with roundness measuring apparatus  
[NASA-CASE-XMF-00480] c14 N70-39898
- Slotted fine-adjustment support for optical devices  
[NASA-CASE-MFS-20249] c15 N72-11386
- Adjustable support device with jacket screw for altering distance between base and supported member  
[NASA-CASE-NFO-10721] c15 N72-27484
- Clock setter  
[NASA-CASE-LAR-11458-1] c35 N76-16392
- AERIAL RUDDERS**
- Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c08 N81-19130
- AEROACOUSTICS**
- Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c05 N80-14107
- AERODYNAMIC BALANCE**
- Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c37 N81-22358
- AERODYNAMIC BRAKES**
- Bluff-shaped annular configuration for supersonic decelerator for reentry vehicles  
[NASA-CASE-XLF-00222] c02 N70-37939
- Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators  
[NASA-CASE-LAR-10776-1] c02 N74-10034
- AERODYNAMIC CHARACTERISTICS**
- Variable aspect ratio and variable sweep delta wing planforms for supersonic aircraft  
[NASA-CASE-XLA-00221] c02 N70-33266
- Designing spacecraft for flight into space, atmospheric reentry, and landing at selected sites  
[NASA-CASE-XAC-02058] c02 N71-16087
- Spacecraft configurations and aerodynamic characteristics of space shuttle systems with two reusable stages  
[NASA-CASE-MS-C-12433] c31 N73-14854
- Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil  
[NASA-CASE-LAR-10585-1] c02 N76-22154
- Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c07 N81-14999



## AERODYNAMIC CONFIGURATIONS

Supersonic aircraft configuration providing for variable aspect ratio and variable sweep wings  
[NASA-CASE-XLA-00166] c02 N70-34178

Aerodynamic configuration for aircraft capable of high speed flight and low drag for low speed takeoff or landing upon presently existing airfields  
[NASA-CASE-XLA-00806] c02 N70-34858

Manned space capsule configuration for orbital flight and atmospheric reentry  
[NASA-CASE-XLA-00149] c31 N70-37938

Aerodynamic configuration of reentry vehicle heat shield to provide longitudinal and directional stability at hypersonic velocities  
[NASA-CASE-XMS-04142] c31 N70-41631

Development and characteristics of translating horizontal tail assembly for supersonic aircraft  
[NASA-CASE-XLA-08801-1] c02 N71-11043

Variable geometry manned orbital vehicle having high aerodynamic efficiency over wide speed range and incorporating auxiliary pivotal wings  
[NASA-CASE-XLA-03691] c31 N71-15674

Afterburner-equipped jet engine nacelle with slotted configuration afterbody  
[NASA-CASE-XLA-10450] c28 N71-21493

Variable geometry rotor system for direct control over wake vortex  
[NASA-CASE-LAR-10557] c02 N72-11018

Development of auxiliary lifting system to provide ferry capability for entry vehicles  
[NASA-CASE-LAR-10574-1] c11 N73-13257

Multistage aerospace craft --- perspective drawings of conceptual design  
[NASA-CASE-XMP-02263] c05 N74-10907

Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c07 N74-28226

Free wing assembly for an aircraft  
[NASA-CASE-PRC-10092-1] c05 N79-12061

**AERODYNAMIC DRAG**  
Skin friction measuring device for aircraft  
[NASA-CASE-PRC-11029-1] c06 N81-17057

**AERODYNAMIC HEATING**  
Development of thermal insulation system for wing and control surfaces of hypersonic aircraft and reentry vehicles  
[NASA-CASE-XLA-00892] c33 N71-17897

Heat flux sensor adapted for mounting on aircraft or spacecraft to measure aerodynamic heat flux inflow to aircraft skin  
[NASA-CASE-XPR-03802] c33 N71-23085

Ablative heat shield for protection from aerodynamic heating of reentry spacecraft  
[NASA-CASE-MSC-12143-1] c33 N72-17947

**AERODYNAMIC LOADS**  
Directed fluid stream for propeller blade loading control  
[NASA-CASE-XAC-00139] c02 N70-34856

Means for controlling aerodynamically induced twist --- equipment to control twisting of slender wings due to aerodynamic loads  
[NASA-CASE-LAR-12175-1] c05 N80-16055

**AERODYNAMIC NOISE**  
Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MFS-23099-1] c09 N76-23273

Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c05 N80-14107

Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c07 N81-14999

**AERODYNAMIC STABILITY**  
Aerodynamically stable meteorological balloon using surface roughness effect  
[NASA-CASE-XMP-04163] c02 N71-23007

Pressure sensor network for measuring liquid dynamic response in flight including fuel tank acceleration, liquid slosh amplitude, and fuel depth monitoring  
[NASA-CASE-XLA-05541] c12 N71-26387

Spacecraft design with single point aerodynamic and hydrodynamic stability for emergency transport of men from space station to splashdown  
[NASA-CASE-MSC-13281] c31 N72-18859

High lift aircraft --- with improved stability, control, performance, and noise characteristics

[NASA-CASE-LAR-11252-1] c05 N75-25914

Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c05 N77-17029

An annular wing  
[NASA-CASE-PRC-11007-2] c02 N79-24959

Aeroelastic instability stoppers for wind-tunnel models  
[NASA-CASE-LAR-12720-1] c09 N81-31229

**AERODYNAMIC STALLING**  
Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c02 N81-14968

**AEROELASTICITY**  
Aeroelastic instability stoppers for wind-tunnel models  
[NASA-CASE-LAR-12720-1] c09 N81-31229

Aeroelastic instability stoppers for wind-tunnel models  
[NASA-CASE-LAR-12458-1] c09 N81-31230

**AERONAUTICAL ENGINEERING**  
Differential pressure cell insensitive to changes in ambient temperature and extreme overload  
[NASA-CASE-XAC-00042] c14 N70-34816

**AEROSOLS**  
Liquid aerosol dispenser with explosively driven piston to compress light gas to extremely high pressure  
[NASA-CASE-MFS-20829] c12 N72-21310

Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c35 N76-22509

Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c25 N78-15210

**AEROSPACE ENGINEERING**  
Modifying existing solar cells for temperature control  
[NASA-CASE-NFO-10109] c03 N71-11049

Metallic film diffusion for boundary lubrication in aerospace engineering  
[NASA-CASE-XLE-10337] c15 N71-24046

Soldering device particularly suited to making high quality wiring joints for aerospace engineering utilizing capillary attraction to regulate flow of solder  
[NASA-CASE-XLA-08911] c15 N71-27214

Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c37 N81-14317

**AEROSPACE ENVIRONMENTS**  
High voltage insulators for direct current in acceleration system of electrostatic thruster  
[NASA-CASE-XLE-01902] c28 N71-10574

Metallic film diffusion into metal or ceramic surfaces for boundary lubrication in aerospace environments  
[NASA-CASE-XLE-01765] c18 N71-10772

Preparation of inorganic solid film lubricants with long wear life and stability in aerospace environments  
[NASA-CASE-XMI-03988] c15 N71-21403

Momentum-velocity analyzer for measuring minute space particles  
[NASA-CASE-XMS-04201] c14 N71-22990

Metal alloy bearing materials for space applications  
[NASA-CASE-XLE-05033] c15 N71-23810

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[NASA-CASE-XNP-05524] c33 N71-24876

Space environment simulator for testing spacecraft components under aerospace conditions  
[NASA-CASE-NPO-10141] c11 N71-24964

High dc switch for causing abrupt, cyclic, decreases of current to operate under zero or varying gravity conditions  
[NASA-CASE-LEW-10155-1] c09 N71-29035

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[NASA-CASE-MSC-14640-1] c54 N76-14804

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[NASA-CASE-WOO-00625] c37 N78-17385

Plasma cleaning device --- designed for high vacuum environments  
[NASA-CASE-MFS-22906-1] c75 N78-27913

Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c27 N78-32262

General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c12 N79-26075

## AEROSPACE MEDICINE

Piston device for producing known constant positive pressure within lungs by using thoracic muscles  
[NASA-CASE-XMS-01615] c05 N70-41329

Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721

**AEROSPACE VEHICLES**

Aerospace configuration with low and high aspect ratio variability for high and low speed flight  
[NASA-CASE-XLA-00142] c02 N70-33286

Landing pad assembly for aerospace vehicles  
[NASA-CASE-XMP-02853] c31 N70-36654

Aerospace vehicle with variable planform for hypersonic and subsonic flight  
[NASA-CASE-XLA-00805] c31 N70-38010

Development of resilient fastener for attaching skin of aerospace vehicles to permit movement of skin relative to framework  
[NASA-CASE-XLA-01027] c31 N71-24035

Chemical spot tests for identification of titanium and titanium alloys used in aerospace vehicles  
[NASA-CASE-LAR-10539-1] c17 N73-12547

**AEROSPACEPLANES**

Multistage aerospace craft --- perspective drawings of conceptual design  
[NASA-CASE-XMP-02263] c05 N74-10907

**AFTERBODIES**

Afterburner-equipped jet engine nacelle with slotted configuration afterbody  
[NASA-CASE-XLA-10450] c28 N71-21493

**AFTERBURNING**

Exhaust nozzle with afterburning for generating thrust  
[NASA-CASE-XLA-00154] c28 N70-33374

**AGING (MATERIALS)**

Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c26 N75-29236

**AGRICULTURE**

Solar-powered pump  
[NASA-CASE-NPO-13567-1] c44 N76-29701

**AILERONS**

Device for controlling rotary potentiometer mounted on aircraft steering wheel or aileron control  
[NASA-CASE-XAC-10019] c15 N71-23809

**AIR**

Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove  
[NASA-CASE-XLE-02531] c05 N71-23080

Superconducting magnetic field trapping device for producing magnetic field in air  
[NASA-CASE-XNP-01185] c26 N73-28710

**AIR CONDITIONING**

Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183] c44 N80-29843

Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c31 N80-32583

**AIR CONDITIONING EQUIPMENT**

Portable apparatus producing high velocity annular air column surrounding low velocity, filtered, superclean air central core for industrial clean room environmental control  
[NASA-CASE-XMP-03212] c15 N71-22721

Air conditioning system and component therefore distributing air flow from opposite directions  
[NASA-CASE-GSC-11445-1] c31 N74-27902

**AIR COOLING**

Modification and improvement of turbine blades for maximum cooling efficiency  
[NASA-CASE-XLE-00092] c15 N70-33264

**AIR FILTERS**

Development of filter apparatus for gas separation and characteristics of filter cell support frame for improved operation  
[NASA-CASE-MSC-12297] c14 N72-23457

**AIR FLOW**

Wind tunnel air flow modulating device and apparatus for selectively generating wave motion in wind tunnel airstream  
[NASA-CASE-XLA-00112] c11 N70-33287

Photographing surface flow patterns on wind tunnel test models  
[NASA-CASE-XLA-01353] c14 N70-41366

Method for maintaining good performance in gas turbine during air flow distortion  
[NASA-CASE-LEW-10286-1] c28 N71-28915

Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c12 N73-28144

Air conditioning system and component therefore distributing air flow from opposite directions  
[NASA-CASE-GSC-11445-1] c31 N74-27902

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[NASA-CASE-ABC-10754-1] c07 N75-24736

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[NASA-CASE-MFS-20325] c28 N71-27095

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Airlock  
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[NASA-CASE-MFS-07369] c15 N71-20443
- Low concentration alkaline solution treatment of aluminum with metal phosphate surface coatings to improve chemical bonding and reduce coating weight  
[NASA-CASE-XLA-01995] c18 N71-23047
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[NASA-CASE-XLE-06969] c17 N71-24142
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- Method of plating copper on aluminum to permit conventional soldering of structural aluminum bodies  
[NASA-CASE-XLA-08966-1] c17 N71-25903
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[NASA-CASE-ERC-10214] c09 N72-31235
- Development of phase control coupling for use with phased array antenna  
[NASA-CASE-ERC-10285] c10 N73-16206
- Plural beam antenna with parabolic reflectors  
[NASA-CASE-GSC-11013-1] c09 N73-19234
- Amplitude steered array  
[NASA-CASE-GSC-11446-1] c33 N74-20860
- Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c17 N76-21250
- Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c32 N78-24391
- RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c44 N78-28594
- Phased array antenna control  
[NASA-CASE-MSC-14939-1] c32 N79-11264
- Phase conjugation method and apparatus for an active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c32 N79-24210
- Scannable beam forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c32 N80-28578
- Frequency translating phase conjugation circuit for active retrodirective antenna array --- microwave transmission  
[NASA-CASE-NPO-14536-1] c32 N81-14185
- Coaxial phased array antenna  
[NASA-CASE-MSC-16800-1] c32 N81-14187
- Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c32 N81-29308
- Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c32 N82-11336
- Multiple-beam, high-power, precision pointing antenna system  
[NASA-CASE-NFC-15406-1] c33 N82-12345
- ANTENNA COMPONENTS**  
Digital servo controller --- for rotating antenna shaft  
[NASA-CASE-KSC-10769-1] c33 N74-29556
- Paraday rotation measurement method and apparatus  
[NASA-CASE-NFC-14839-1] c35 N82-15381
- ANTENNA COUPLERS**  
Dual band combiner for horn antenna  
[NASA-CASE-NFO-14519-1] c32 N80-23524
- ANTENNA DESIGN**  
Development and characteristics of low-noise multimode monopulse antenna feed system for use with microwave communication equipment  
[NASA-CASE-XNF-01735] c07 N71-22750
- Nose cone mounted heat resistant antenna comprising plurality of adjacent layers of silica not introducing paths of high thermal conductivity through ablative shield  
[NASA-CASE-XMS-04312] c07 N71-22984
- Development of electronic circuit for combining input signals on two separate antennas to form two processed signals  
[NASA-CASE-MSC-12205-1] c07 N71-27056
- Development and characteristics of extensible dipole antenna using deformable tubular metallic strip element  
[NASA-CASE-HQB-00937] c07 N71-28979
- Development of method for suppressing excitation of electromagnetic surface waves on dielectric converter antenna  
[NASA-CASE-XLA-10772] c07 N71-28980
- Target acquisition antenna feed with reflector system  
[NASA-CASE-GSC-10064-1] c10 N72-22235
- Collapsible high gain antenna which can be automatically expanded to operating state  
[NASA-CASE-KSC-10392] c07 N73-26117
- Dish antenna having switchable beamwidth --- with truncated concave ellipsoid subreflector  
[NASA-CASE-GSC-11760-1] c33 N75-19516
- Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c32 N76-15330
- Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NFO-13568-1] c32 N76-21365
- Furlable antenna --- antenna design  
[NASA-CASE-NFO-13553-1] c33 N76-32457
- Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c32 N80-29539
- Complementary cross-slot phased array antenna  
[NASA-CASE-MSC-18532-1] c32 N80-29543
- Multiple band circularly polarized microstrip antenna  
[NASA-CASE-MSC-18334-1] c32 N80-32604
- ANTENNA FEEDS**  
Design and operation of multi-feed cone Cassegrain antenna  
[NASA-CASE-NPO-10539] c07 N71-11285
- Characteristics of antenna horn feeds consisting of central horn with overlapping peripheral horns  
[NASA-CASE-GSC-10452] c07 N71-12396
- Target acquisition antenna feed with reflector system  
[NASA-CASE-GSC-10064-1] c10 N72-22235
- Multimode antenna feed system for microwave and broadband communication  
[NASA-CASE-GSC-11046-1] c07 N73-28013
- Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c32 N74-11000
- High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c32 N74-20863
- Single frequency, two feed dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11968-1] c32 N76-15329
- Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c32 N78-31321
- Antenna feed system for receiving circular polarization and transmitting linear polarization  
[NASA-CASE-NPO-14362-1] c32 N80-16261
- Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c32 N81-25278
- Unequal split microwave power divider  
[NASA-CASE-LAR-12889-1] c33 N81-31483

Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c32 N82-10287

## ANTENNA RADIATION PATTERNS

Broadband chokes and absorbers to reduce  
spurious radiation patterns of antenna array  
caused by support structures  
[NASA-CASE-XMS-05303] c07 N69-27462

Multiple mode horn antenna with radiation  
pattern of equal beamwidths and suppressed  
sidelobes  
[NASA-CASE-XNP-01057] c07 N71-15907

Monopulse scanning network for scanning  
volumetric antenna pattern  
[NASA-CASE-GSC-10299-1] c09 N71-24804

High impact antennas with high radiating  
efficiency  
[NASA-CASE-NFO-10231] c07 N71-26101

Pattern and impedance matching improvements in  
transversely polarized triaxial antenna  
[NASA-CASE-XGS-02290] c07 N71-28809

System for locating lightning strokes by  
coordination of directional antenna signals  
[NASA-CASE-KSC-10729-1] c09 N73-32110

Highly efficient antenna system using a  
corrugated horn and scanning hyperbolic  
reflector  
[NASA-CASE-NFO-13568-1] c32 N76-21365

Coaxial phased array antenna  
[NASA-CASE-MSC-16800-1] c32 N81-14187

Multiple-beam, high-power, precision pointing  
antenna system  
[NASA-CASE-NPO-15406-1] c33 N82-12345

## ANTENNAS

Antenna design with self erecting mesh reflector  
[NASA-CASE-XGS-09190] c31 N71-16102

High impact antennas with high radiating  
efficiency  
[NASA-CASE-NPO-10231] c07 N71-26101

Collapsible antenna boom and coaxial  
transmission line having inflatable inner tube  
[NASA-CASE-MFS-20068] c07 N71-27191

Conical reflector antenna with feed  
approximating line source  
[NASA-CASE-NPO-10303] c07 N72-22127

Antenna grout replacement system  
[NASA-CASE-NPO-15205-1] c37 N81-19457

## ANTIBIOTICS

Determination of antimicrobial susceptibilities  
on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750

## ANTIFRICTION BEARINGS

Development of hybrid bearing lubrication system  
with combination of standard type lubrication  
and magnetic flux field for earth atmosphere  
and space environment operation  
[NASA-CASE-XNP-01641] c15 N71-22997

Development of rolling element bearing for  
operation in ultrahigh vacuum environment  
[NASA-CASE-XLE-09527-2] c15 N71-26189

Fatigue life of hybrid antifriction bearings at  
ultrahigh speeds  
[NASA-CASE-LFW-11152-1] c15 N73-32359

Hollow high strength rolling elements for  
antifriction bearings fabricated from  
preformed components  
[NASA-CASE-LFW-11026-1] c15 N73-33383

Method of making bearing materials ---  
self-lubricating, oxidation resistant  
composites for high temperature applications  
[NASA-CASE-LFW-11930-4] c24 N79-17916

Method of making bearing material  
[NASA-CASE-LFW-11930-3] c24 N80-33482

## ANTIGRAVITY

Anti-gravity device  
[NASA-CASE-MFS-22758-1] c70 N75-26789

## ANTIHISTAMINICS

Indomethacin-antihistamine combination for  
gastric ulceration control  
[NASA-CASE-ABC-11118-2] c52 N81-14613

Indomethacin-antihistamine combination for  
gastric ulceration control  
[NASA-CASE-ABC-11118-1] c52 N81-29764

## ANTIREFLECTION COATINGS

Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LFW-11496-1] c44 N77-14580

## ANVILS

Exponential horn, copper plate, magnetic hammer,  
and anvil in apparatus for making diamonds  
[NASA-CASE-MFS-20698] c15 N72-20446

## APERTURES

Apertured electrode focusing system for ion  
sources with nonuniform plasma density  
[NASA-CASE-XNP-03332] c09 N71-10618

Threadless fastener apparatus comprising  
receiving apertures for plurality of articles,  
self-locked condition, and capable of using  
nonmalleable materials in both ends  
[NASA-CASE-XPR-05302] c15 N71-23254

Apparatus for on-film optical recording of  
camera lens aperture and focus setting  
[NASA-CASE-MSC-12363-1] c14 N73-26431

Method of forming aperture plate for electron  
microscope  
[NASA-CASE-ABC-10448-2] c74 N75-12732

Method of making an apertured casting --- using  
duplicate mold  
[NASA-CASE-LEW-11169-1] c37 N76-23570

Electron microscope aperture system  
[NASA-CASE-ABC-10448-3] c35 N77-14408

Clutter free synthetic aperture radar correlator  
[NASA-CASE-NFO-14035-1] c32 N78-18266

## APOLLO PROJECT

Intra- and extravehicular life support space  
suite for Apollo astronauts  
[NASA-CASE-MSC-12609-1] c05 N73-32012

## APOLLO SPACECRAFT

Low onset rate energy absorber in form of strut  
assembly for crew couch of Apollo command module  
[NASA-CASE-MSC-12279-1] c15 N70-35679

Energy absorbing crew couch strut for Apollo  
command module  
[NASA-CASE-MSC-12279] c15 N72-17450

## APPLICATIONS OF MATHEMATICS

Apparatus for computing square roots  
[NASA-CASE-XGS-04768] c08 N71-19437

## APPROACH

Spectrally balanced chromatic landing approach  
lighting system  
[NASA-CASE-ABC-10990-1] c04 N82-16059

## AQUEOUS SOLUTIONS

Anti-fog composition --- for prevention of  
fogging on surfaces such as space helmet  
visors and windshields  
[NASA-CASE-MSC-13530-2] c23 N75-14834

Automated system for identifying traces of  
organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c25 N76-18245

Method for separating biological cells ---  
suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c51 N80-16715

Method of forming dynamic membrane on stainless  
steel support  
[NASA-CASE-MSC-18172-1] c26 N80-19237

Method of cross-linking polyvinyl alcohol and  
other water soluble resins  
[NASA-CASE-LEW-13103-1] c27 N80-32516

Electrophotolysis oxidation system for  
measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c25 N82-12166

Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c37 N82-12441

## ARC DISCHARGES

Development of device to prevent high voltage  
arcing in electron beam welding  
[NASA-CASE-XMF-08522] c15 N71-19486

Direct current powered self repeating plasma  
accelerator with interconnected annular and  
linear discharge channels  
[NASA-CASE-XLA-03103] c25 N71-21693

Method and apparatus for nondestructive testing  
--- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c38 N74-15395

Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c33 N77-28385

## ARC HEATING

Magnetically diffused radial electric arc heater  
[NASA-CASE-XLA-00330] c33 N70-34540

Electric arc device for minimizing electrode  
ablation and heating gases to supersonic or  
hypersonic wind tunnel temperatures  
[NASA-CASE-XAC-00319] c25 N70-41628

Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c09 N77-10071

## ARC JET ENGINES

Improving performance of magnetoplasma dynamic  
arc rocket engine  
[NASA-CASE-LEW-11180-1] c25 N73-25760

## ARC LAMPS

- Starting circuit design for initiating and maintaining arcs in vapor lamps  
[NASA-CASE-XNP-01058] c09 N71-12540
- Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NFO-11510-1] c33 N77-21315
- Depressurization of arc lamps  
[NASA-CASE-NFO-10790-1] c33 N77-21316
- Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c33 N77-22386
- Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c31 N78-17238
- Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c33 N80-14330

## ARC WELDING

- Emission spectroscopy method for contamination monitoring of inert gas metal arc welding  
[NASA-CASE-XMF-02039] c15 N71-15871
- Automatic closed circuit television arc guidance control for welding joints  
[NASA-CASE-MFS-13046] c07 N71-19433
- Development of device to prevent high voltage arcing in electron beam welding  
[NASA-CASE-XMF-08522] c15 N71-19486
- Development of apparatus for automatically changing carriage speed of welding machine to obtain constant speed of torch along work surface  
[NASA-CASE-XMF-07069] c15 N71-23815
- Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c37 N75-19683

## ARCHITECTURE

- Development of construction block in form of container folded from flat sheet and filled with solid material for architectural purposes  
[NASA-CASE-MSC-12233-2] c32 N73-13921

## ARCHITECTURE (COMPUTERS)

- Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c60 N79-27864

## ARM (ANATOMY)

- Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c09 N74-30597
- Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c54 N75-12616
- Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c37 N79-28551

## ARMATURES

- Design and development of electric motor with stationary field and armature windings which operates on direct current  
[NASA-CASE-XGS-C5290] c09 N71-25999
- Solenoid valve including guide for armature and valve member  
[NASA-CASE-GSC-10607-1] c15 N72-20442
- Direct current motor including stationary field windings and stationary armature winding  
[NASA-CASE-XGS-07805] c15 N72-33476
- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c44 N80-29834
- Linear magnetic bearings --- active magnetic suspension of armatures  
[NASA-CASE-GSC-12582-1] c37 N81-16469

## AROMATIC COMPOUNDS

- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232
- Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c27 N78-32261
- Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c27 N81-17260

## ARRAYS

- Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c32 N80-18253
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c35 N81-12389

## ARTERIES

- Arterial pulse wave pressure transducer

- [NASA-CASE-GSC-11531-1] c52 N74-27566
- ARTIFICIAL CLOUDS**  
Chemical system for releasing barium to create ion clouds in upper atmosphere and interplanetary space  
[NASA-CASE-LAR-10670-1] c06 N73-30097
- ARTIFICIAL GRAVITY**  
Artificial gravity system for simulating self-locomotion capability of astronauts in rotating environments  
[NASA-CASE-XLA-03127] c11 N71-10776
- Development of method for producing artificial gravity in manned spacecraft  
[NASA-CASE-XNP-02595] c31 N71-21881
- Spacecraft with artificial gravity and earthlike atmosphere  
[NASA-CASE-LEW-11101-1] c31 N73-32750
- ARTIFICIAL INTELLIGENCE**  
Tactile sensing system --- manipulator controllers  
[NASA-CASE-NPO-15094-1] c33 N81-16386
- ARTIFICIAL SATELLITES**  
Gravity gradient attitude control system with gravity gradiometer and reaction wheels for artificial satellite attitude control  
[NASA-CASE-GSC-10555-1] c21 N71-27324
- ASBESTOS**  
Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MSC-12568-1] c24 N76-14204
- ASPECT RATIO**  
Variable aspect ratio and variable sweep delta wing planforms for supersonic aircraft  
[NASA-CASE-XLA-00221] c02 N70-33266
- Supersonic aircraft configuration providing for variable aspect ratio and variable sweep wings  
[NASA-CASE-XLA-00166] c02 N70-34178
- Supersonic aircraft variable sweep wing planform for varying aspect ratio  
[NASA-CASE-XLA-00350] c02 N70-38011
- ASPHALT**  
Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c27 N78-33228
- ASSAYING**  
Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c51 N78-22585
- ASSEMBLIES**  
Multiple Belleville spring assembly with even load distribution  
[NASA-CASE-XNP-00840] c15 N70-38225
- Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c37 N77-32501
- Foldable beam  
[NASA-CASE-LAR-12077-1] c31 N81-25259
- ASTRONAUT LOCOMOTION**  
Artificial gravity system for simulating self-locomotion capability of astronauts in rotating environments  
[NASA-CASE-XLA-03127] c11 N71-10776
- Space suit with pressure-volume compensator system  
[NASA-CASE-XLA-05332] c05 N71-11194
- Equipotential space suits utilizing mechanical aids to minimize astronaut energy at bending joints  
[NASA-CASE-LAR-10007-1] c05 N71-11195
- Space suit using nonflexible material with low leakage and providing protection against thermal extremes, physical punctures, and radiation with high mobility articulation  
[NASA-CASE-XAC-07043] c05 N71-23161
- Development of improved convolute section for pressurized suits to provide high degree of mobility in response to minimum of applied torque  
[NASA-CASE-XMS-09637-1] c05 N71-24730
- Gravity environment simulation by locomotion and restraint aid for studying manual operation performance of astronauts at zero gravity  
[NASA-CASE-ARC-10153] c05 N71-28619
- Walking boot assembly  
[NASA-CASE-ARC-11101-1] c54 N78-17675
- Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c54 N79-24651
- ASTRONAUT MANEUVERING EQUIPMENT**  
Hand-held maneuvering unit for propulsion and attitude control of astronauts in zero or reduced gravity environment  
[NASA-CASE-XMS-05304] c05 N71-12336

Space environmental work simulator with portions of space suit mounted to vacuum chamber wall  
[NASA-CASE-XMF-07488] c11 N71-18773

Lightweight propulsion unit for movement of personnel and equipment across lunar surface  
[NASA-CASE-MFS-20130] c28 N71-27585

**ASTRONAUT PERFORMANCE**

Gravity environment simulation by locomotion and restraint aid for studying manual operation performance of astronauts at zero gravity  
[NASA-CASE-ARC-10153] c05 N71-28619

Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c54 N78-31735

**ASTRONAUT TRAINING**

Attitude control training device for astronauts permitting friction-free movement with five degrees of freedom  
[NASA-CASE-XMS-02977] c11 N71-10746

Low and zero gravity simulator for astronaut training  
[NASA-CASE-MFS-10555] c11 N71-19494

Apparatus for training astronaut crews to perform on simulated lunar surface under conditions of lunar gravity  
[NASA-CASE-XMS-04798] c11 N71-21474

**ASTRONAUTS**

Three transceiver lunar emergency system to relay voice communication of astronaut  
[NASA-CASE-MFS-21042] c07 N72-25171

Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MFS-21481-1] c37 N74-18127

**ASTRONAVIGATION**

Guidance analyzer having suspended spacecraft simulating sphere for astronavigation  
[NASA-CASE-XNP-09572] c14 N71-15621

**ASTRONOMICAL PHOTOGRAPHY**

Cameras for photographing meteors in selected sky area  
[NASA-CASE-LAR-10226-1] c14 N73-19419

**ASTRONOMICAL TELESCOPES**

Light sensitive control system for automatically opening and closing dome of solar optical telescope  
[NASA-CASE-MSC-10966] c14 N71-19568

Laser beam projector for continuous, precise alignment between target, laser generator, and astronomical telescope during tracking  
[NASA-CASE-NPO-11087] c23 N71-29125

Star image action compensator using telescope for maintaining fixed images  
[NASA-CASE-LAR-10523-1] c14 N72-22444

Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c89 N79-10969

**ASYMMETRY**

Asymmetric polyimide separation membrane and method  
[NASA-CASE-NPO-15431-1] c25 N81-29178

**ATMOSPHERIC COMPOSITION**

Design and development of two types of atmosphere sampling chambers  
[NASA-CASE-NPO-11373] c13 N72-25323

Development and operation of apparatus for sampling particulates in gases in upper atmosphere  
[NASA-CASE-HQN-10037-1] c14 N73-27376

Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c35 N74-11284

Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c25 N80-23383

Mobile sampler for use in acquiring samples of terrestrial atmospheric gasses  
[NASA-CASE-NPO-15220-1] c35 N81-24414

**ATMOSPHERIC ENTRY**

Designing spacecraft for flight into space, atmospheric reentry, and landing at selected sites  
[NASA-CASE-XAC-02058] c02 N71-16087

Development of method for measuring electron density gradients of plasma sheath around space vehicle during atmospheric entry  
[NASA-CASE-XLA-06232] c25 N71-20563

Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c19 N74-21015

**ATMOSPHERIC ENTRY SIMULATION**

Crossed-field plasma accelerator for laboratory simulation of atmospheric reentry conditions  
[NASA-CASE-XLA-00675] c25 N70-33267

Wind tunnel method for simulating flow fields around blunt vehicles entering planetary atmospheres without involving high temperatures  
[NASA-CASE-LAR-11138] c12 N71-20436

**ATMOSPHERIC PHYSICS**

Development and characteristics of apparatus for measuring intensity of electric field in atmosphere  
[NASA-CASE-KSC-10730-1] c14 N73-32318

**ATMOSPHERIC PRESSURE**

Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c26 N80-14229

**ATMOSPHERIC RADIATION**

Radiometric measuring system for solar activity and atmospheric attenuation and emission  
[NASA-CASE-ERC-10276] c14 N73-26432

**ATMOSPHERIC REFRACTION**

Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-1] c36 N81-22344

**ATMOSPHERIC SCATTERING**

Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c36 N75-15028

**ATMOSPHERIC SOUNDING**

Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c46 N82-12685

**ATMOSPHERIC TURBULENCE**

Passive optical wind and turbulence remote detection system  
[NASA-CASE-XMF-14032] c20 N71-16340

Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493

**ATOMIZERS**

Portable cryogenic cooling system design including turbine pump, cooling chamber, and atomizer  
[NASA-CASE-NPO-10467] c23 N71-26654

Improved constant-output atomizer  
[NASA-CASE-MFS-25631-1] c34 N82-10360

**ATS**

Doppler frequency shift correction device for multiplex communication with Applications Technology Satellites  
[NASA-CASE-XGS-02749] c07 N69-39978

**ATTACHMENT**

Silicon carbide backward diode with coated lead attachment  
[NASA-CASE-ERC-10224-2] c09 N73-27150

**ATTENUATORS**

Rotary vane attenuator with two stators and intermediary rotor, using resistive and orthogonally disposed cards  
[NASA-CASE-NPC-11418-1] c14 N73-13420

Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c52 N80-23969

**ATTITUDE (INCLINATION)**

Analog spatial maneuver computer with three output angles for obtaining desired spatial attitude  
[NASA-CASE-GSC-10880-1] c08 N72-11172

Spacecraft attitude sensing system design with narrow field of view sensor rotating about spacecraft x-y axis  
[NASA-CASE-GSC-10890-1] c21 N73-30640

Interferometer mirror tilt correcting system  
[NASA-CASE-NFO-13687-1] c35 N78-18391

**ATTITUDE CONTROL**

Visual target luminaires for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c31 N69-27499

Unitary three-axis controller for flight vehicles within or outside atmosphere  
[NASA-CASE-XFB-00181] c21 N70-33279

Sensing method and device for determining orientation of space vehicle or satellite by using particle traps  
[NASA-CASE-XGS-00466] c21 N70-34297

Attitude and propellant flow control system for liquid propellant rocket vehicles  
[NASA-CASE-XMF-00185] c21 N70-34539

Spacecraft attitude control system using solar and earth sensors, gyroscopes, and jet actuators  
[NASA-CASE-XNP-00465] c21 N70-35395

- Attitude control device for space vehicles  
[NASA-CASE-XNP-00294] c21 N70-36938
- Attitude orientation control of spin stabilized final stage space vehicles, using horizon scanners  
[NASA-CASE-XLA-00281] c21 N70-36943
- Automatic ejection valve for attitude control and midcourse guidance of space vehicles  
[NASA-CASE-XNP-00676] c15 N70-38996
- Three-axis controller operated by hand-wrist motion for yaw, pitch, and roll control  
[NASA-CASE-XAC-01404] c05 N70-41581
- Attitude control training device for astronauts permitting friction-free movement with five degrees of freedom  
[NASA-CASE-XMS-02977] c11 N71-10746
- Photomultiplier detector of Canopus for spacecraft attitude control  
[NASA-CASE-XNP-03914] c21 N71-10771
- Automatic balancing device for use on frictionless supported attitude-controlled test platforms  
[NASA-CASE-LAR-10774] c10 N71-13545
- Development of spacecraft experiment pointing and attitude control system  
[NASA-CASE-XLA-05464] c21 N71-14132
- Development of attitude control system for spacecraft orientation  
[NASA-CASE-XGS-04393] c21 N71-14159
- System for aerodynamic control of rocket vehicles by secondary injection of fluid into nozzle exhaust stream  
[NASA-CASE-XLA-01163] c21 N71-15582
- Drive mechanism for operating reactance attitude control system for aerospace bodies  
[NASA-CASE-XMF-01598] c21 N71-15583
- Attitude detection system using stellar references for three-axis control and spin stabilized spacecraft  
[NASA-CASE-XGS-03431] c21 N71-15642
- Remote control device operated by movement of finger tips for manual control of spacecraft attitude  
[NASA-CASE-XAC-02405] c09 N71-16089
- Thrust and attitude control apparatus using jet nozzle in movable canard surface or fin configuration  
[NASA-CASE-XLE-03583] c31 N71-17629
- Attitude sensor with scanning mirrors for detecting orientation of space vehicle with respect to planet  
[NASA-CASE-XLA-00793] c21 N71-22880
- Development of attitude control system for sounding rocket stabilization during ballistic phase of flight  
[NASA-CASE-XGS-01654] c31 N71-24750
- Development of voice operated controller for controlling reaction jets of spacecraft  
[NASA-CASE-XLA-04063] c31 N71-33160
- Attitude sensor  
[NASA-CASE-LAR-10586-1] c19 N74-15089
- Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NFO-13044-1] c35 N74-15094
- Sun direction detection system  
[NASA-CASE-NPO-13722-1] c74 N77-22951
- Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c08 N81-19130
- ATTITUDE GYROS**
- Spacecraft attitude control system using solar and earth sensors, gyroscopes, and jet actuators  
[NASA-CASE-XNP-00465] c21 N70-35395
- Attitude control system  
[NASA-CASE-NFS-22787-1] c15 N77-10113
- ATTITUDE INDICATORS**
- Photosensitive light source device for detecting unmanned spacecraft deviation from reference attitude  
[NASA-CASE-XNP-00438] c21 N70-35089
- Hand controller operable about three respectively perpendicular axes and capable of actuating signal generators for attitude control devices  
[NASA-CASE-XMS-07487] c15 N71-23255
- Combined optical attitude and altitude indicating instrument for use in aircraft or spacecraft  
[NASA-CASE-XLA-01907] c14 N71-23268
- Aircraft horizon and vertical indicator  
[NASA-CASE-ERC-10392] c21 N73-14692
- Attitude sensor  
[NASA-CASE-LAR-10586-1] c19 N74-15089
- Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c19 N76-22284
- Air speed and attitude probe  
[NASA-CASE-PRC-11009-1] c06 N80-18036
- Aircraft body-axis rotation measurement system  
[NASA-CASE-PRC-11043-1] c06 N81-22048
- ATTITUDE STABILITY**
- Dynamic precession damping of spin-stabilized vehicles by using rate gyroscope and angular accelerometer  
[NASA-CASE-XLA-01989] c21 N70-34295
- Attitude stabilizer for nonguided missile or vehicle with respect to trajectory  
[NASA-CASE-ARC-10134] c30 N72-17873
- Method of and apparatus for damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c18 N81-12156
- AUDIO EQUIPMENT**
- Audio equipment for removing impulse noise from audio signals  
[NASA-CASE-NPO-11631] c10 N73-12244
- AUDIO FREQUENCIES**
- High efficiency transformerless amplitude modulator coupled to RF power amplifier  
[NASA-CASE-GSC-10668-1] c07 N71-28430
- Audio frequency analysis circuit for determining, displaying, and recording frequency of sweeping audio frequency signal  
[NASA-CASE-NPO-11147] c14 N72-27408
- AUDITORY DEFECTS**
- Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c33 N78-10375
- AUDITORY PERCEPTION**
- Auditory display for the blind  
[NASA-CASE-HCN-10832-1] c71 N74-21014
- AUDITORY SIGNALS**
- Audio signal processing system for noise surge elimination at low amplitude audio input  
[NASA-CASE-MSC-12223-1] c07 N71-26181
- Audio equipment for removing impulse noise from audio signals  
[NASA-CASE-NFO-11631] c10 N73-12244
- AUDITORY STIMULI**
- Auditory display for the blind  
[NASA-CASE-HCN-10832-1] c71 N74-21014
- AUGER EFFECT**
- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c37 N81-24446
- AUSTENITIC STAINLESS STEELS**
- Intermetallic chromium containing nickel aluminide for high temperature corrosion protection of stainless steels  
[NASA-CASE-LFW-11267-1] c17 N73-32414
- Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c26 N76-18257
- AUTOCALVES**
- System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c54 N81-24724
- AUTOCORRELATION**
- Linear three-tap feedback shift register  
[NASA-CASE-NPO-10351] c08 N71-12503
- Circuitry for developing autocorrelation function continuously within signal receiving period  
[NASA-CASE-XNP-00746] c07 N71-21476
- An electro-optical Doppler tracker means and method for optical correlation of synthetic aperture radar data  
[NASA-CASE-NFO-14998-1] c33 N81-15194
- AUTOMATIC CONTROL**
- Automatic control of voltage supply to direct current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39987
- Electro-optical/computer system for aligning large structural members and maintaining correct position  
[NASA-CASE-XNF-02029] c14 N70-41955
- Pulsed energy power system for application of combustible gases to turbine controlling ac



voltage generator  
[NASA-CASE-MSC-13112] c03 N71-11057

Automatic balancing device for use on  
frictionless supported attitude-controlled  
test platforms  
[NASA-CASE-LAR-10774] c10 N71-13545

Computer controlled apparatus for maintaining  
welding torch angle and velocity during seam  
tracking  
[NASA-CASE-XMF-03287] c15 N71-15607

Fluid leakage detection system with automatic  
monitoring capability  
[NASA-CASE-LAR-10323-1] c12 N71-17573

Light sensitive control system for automatically  
opening and closing dome of solar optical  
telescope  
[NASA-CASE-MSC-10966] c14 N71-19568

Welding torch with automatic speed controller  
using speed sensing wheel and closed servo  
system  
[NASA-CASE-XMF-01730] c15 N71-23050

Microwave waveguide switch with rotor position  
control  
[NASA-CASE-XNP-06507] c09 N71-23548

Automatically reciprocating, high pressure pump  
for use in spacecraft cryogenic propellants  
[NASA-CASE-XNP-04731] c15 N71-24042

Automatic controlled thermal fatigue testing  
apparatus  
[NASA-CASE-XLA-02059] c33 N71-24276

Automatically charging battery of electric  
storage cells  
[NASA-CASE-XNP-04758] c03 N71-24605

Electric motor control system with pulse width  
modulation for providing automatic null  
seeking servo  
[NASA-CASE-XMF-05195] c10 N71-24861

Indexing mechanism for cathode array  
substitution in electron beam tube  
[NASA-CASE-NPO-10625] c09 N71-26182

Voltage range selection apparatus for sensing  
and applying voltages to electronic  
instruments without loading signal source  
[NASA-CASE-XMS-06497] c14 N71-26244

Automated fluid chemical analyzer for  
microchemical analysis of small quantities of  
liquids by use of selected reagents and  
analyzer units  
[NASA-CASE-XNP-09451] c06 N71-26754

Automatic control device for regulating inlet  
water temperature of liquid cooled spacesuit  
[NASA-CASE-MSC-13917-1] c05 N72-15098

Optimal control system for automatic speed  
regulation of electric driven motor vehicle  
[NASA-CASE-NFO-11210] c11 N72-20244

Plotter device for automatically drawing  
equipotential lines on sheet of resistance paper  
[NASA-CASE-NPO-11134] c09 N72-21246

Automatic shunting of ion thruster magnetic  
field when thruster is not operating  
[NASA-CASE-LEW-10835-1] c28 N72-22771

Automatic temperature control for liquid cooled  
space suit  
[NASA-CASE-ARC-10599-1] c05 N73-26071

Speed control system for dc motor equipped with  
brushless Hall effect device  
[NASA-CASE-MFS-20207-1] c09 N73-32107

Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c52 N74-22771

Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c09 N75-12968

Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014

Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c66 N76-19888

Automatic visual inspection system for  
microelectronics  
[NASA-CASE-NFO-13282] c38 N78-17396

Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c35 N78-19466

Method for producing solar energy panels by  
automation  
[NASA-CASE-LEW-12541-1] c44 N78-25529

Circuit for automatic load sharing in parallel  
converter modules  
[NASA-CASE-NPO-14056-1] c33 N79-24257

Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c44 N80-14474

Automatic thermal switch  
[NASA-CASE-GSC-12553-1] c33 N80-21671

Method of growing a ribbon crystal particularly  
suited for facilitating automated control of  
ribbon width  
[NASA-CASE-NPO-14295-1] c76 N80-32245

Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c07 N81-19116

Variable speed drive  
[NASA-CASE-GSC-12643-1] c37 N81-24447

Programmable scan/read circuitry for charge  
coupled device imaging detectors --- for a  
startracker  
[NASA-CASE-NFO-15345-1] c33 N81-27403

**AUTOMATIC CONTROL VALVES**

Ambient atmospheric pressure sensing device for  
determining altitude of flight vehicles  
[NASA-CASE-XLA-00128] c15 N70-37925

Describing metal valve pintle with encapsulated  
elastomeric body  
[NASA-CASE-MSC-12116-1] c15 N71-17648

Semitoroidal diaphragm cavitating flow control  
valve  
[NASA-CASE-XNP-09704] c12 N71-18615

Reliability of automatic refilling valving  
device for cryogenic liquid systems  
[NASA-CASE-NFO-11177] c15 N72-17453

Combined pressure regulator and shutoff valve  
[NASA-CASE-NFO-13201-1] c37 N75-15050

Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c54 N78-14784

Automatic compression adjusting mechanism for  
internal combustion engines  
[NASA-CASE-MSC-18807-1] c37 N81-29442

**AUTOMATIC FREQUENCY CONTROL**

System for phase locking onto carrier frequency  
signal located within receiver bandpass  
[NASA-CASE-XGS-04994] c09 N69-21543

Audio signal processing system for noise surge  
elimination at low amplitude audio input  
[NASA-CASE-MSC-12223-1] c07 N71-26181

Automatic frequency control device for providing  
frequency reference for voltage controlled  
oscillator  
[NASA-CASE-KSC-10393] c09 N72-21247

Self-tuning electronic filter for maintaining  
constant bandwidth and center frequency gain  
[NASA-CASE-ARC-10264-1] c09 N73-20231

**AUTOMATIC GAIN CONTROL**

Automatic gain control amplifier system  
[NASA-CASE-XMS-05307] c09 N69-24330

Automatic measuring and recording of gain and  
zero drift characteristics of electronic  
amplifier  
[NASA-CASE-XMS-05562-1] c09 N69-39986

Self-tuning electronic filter for maintaining  
constant bandwidth and center frequency gain  
[NASA-CASE-ARC-10264-1] c09 N73-20231

Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c33 N79-22373

Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c33 N81-29347

**AUTOMATIC TEST EQUIPMENT**

Automated visual sensitivity tester for  
determining visual field sensitivity and blind  
spot size  
[NASA-CASE-ARC-10329-1] c05 N73-26072

Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c35 N75-27330

Visual examination apparatus  
[US-PATENT-RE-28,921] c52 N76-30793

Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c52 N79-12694

Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c34 N81-26402

**AUTOMATION**

Automated multi-level vehicle parking system  
[NASA-CASE-NFO-13058-1] c37 N77-22480

**AUTOMOBILE ENGINES**

Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c37 N78-24545

Controller for computer control of brushless dc  
motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c33 N81-20352

**AUTOMOBILE FUELS**

Hydrogen rich gas generator  
[NASA-CASE-NFO-13342-2] c44 N76-29700

**AUTOMOBILES**

Fiberglass/epoxy composite automotive door

- structure including a glass-reinforced intrusion strip  
[NASA-CASE-NPO-15057-1] c24 N81-19230
- AUXILIARY POWER SOURCES**  
Independent power generator  
[NASA-CASE-LAR-11208-1] c44 N78-32539
- AXES (REFERENCE LINES)**  
Test fixture for measuring moment of inertia of irregularly shaped body with multiple axes  
[NASA-CASE-XGS-01023] c14 N71-22992  
Mechanism for restraining universal joints to prevent separation while allowing bending, angulation, and lateral offset in any position about axis  
[NASA-CASE-XNP-02278] c15 N71-28951  
Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c32 N82-10287
- AXES OF ROTATION**  
Unitary three-axis controller for flight vehicles within or outside atmosphere  
[NASA-CASE-XFR-00181] c21 N70-33279  
Proportional controller for regulating aircraft or spacecraft motion about three axes  
[NASA-CASE-XAC-03392] c03 N70-41954  
Electrical and electromechanical trigonometric computation assembly and space vehicle guidance system for aligning perpendicular axes of two sets of three-axes coordinate references  
[NASA-CASE-XMF-00684] c21 N71-21688  
Hand controller operable about three respectively perpendicular axes and capable of actuating signal generators for attitude control devices  
[NASA-CASE-XMS-07487] c15 N71-23255
- AXIAL COMPRESSION LOADS**  
Development and characteristics of device for indicating and recording magnitude of force applied in axial direction  
[NASA-CASE-MSC-15626-1] c14 N72-25411  
Compression test fixture  
[NASA-CASE-MSC-18723-1] c39 N81-24470
- AXIAL FLOW TURBINES**  
Multistage multiple reentry axial flow reaction turbine with reverse flow reentry ducting  
[NASA-CASE-XLE-00170] c15 N70-36412  
Multistage, multiple reentry, single rotor, axial flow turbine  
[NASA-CASE-XLE-00085] c28 N70-39895  
Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c34 N79-20335
- AXIAL LOADS**  
Ball locking device which releases in response to small forces when subjected to high axial loads  
[NASA-CASE-XMF-01371] c15 N70-41829  
Method for measuring biaxial stress in a body subjected to stress inducing loads  
[NASA-CASE-MFS-23299-1] c39 N77-28511
- AXIAL STRESS**  
Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c37 N76-18459  
Method for measuring biaxial stress in a body subjected to stress inducing loads  
[NASA-CASE-MFS-23299-1] c39 N77-28511
- AZIMUTH**  
Tracking mount for laser telescope employed in tracking large rockets and space vehicles to give information regarding azimuth and elevation  
[NASA-CASE-MFS-14017] c14 N71-26627  
Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c36 N74-21091  
Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c04 N77-19056  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c32 N80-32607  
A pipelined digital SAR azimuth correlator using hybrid FFT/transversal-filter  
[NASA-CASE-NPO-15519-1] c32 N82-12298
- AZINES**  
Synthesis of azine polymers for heat shields by azine-aromatic aldehyde reaction  
[NASA-CASE-XMF-08656] c06 N71-11242  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315  
Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c27 N79-28307  
Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c25 N81-14016  
Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c27 N81-17259
- AZO COMPOUNDS**  
Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c31 N74-13177
- AZOLES**  
Preparation of perfluorinated 1,2,4-oxadiazoles --- heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-2] c25 N80-26407
- B**
- BACK INJURIES**  
Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c52 N81-25662
- BACKGROUND NOISE**  
Electronic background suppression field scanning sensor for detecting point source targets  
[NASA-CASE-XGS-05211] c07 N69-39980
- BACKGROUND RADIATION**  
Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NFO-13683-1] c35 N77-14411
- BACKSCATTERING**  
Apparatus for measuring backscatter and transmission characteristics of sample segment of large spherical passive satellites  
[NASA-CASE-XGS-02608] c07 N70-41678  
Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c35 N74-15091
- BACKUPS**  
Flexible backup bar for welding awkwardly shaped structures  
[NASA-CASE-XMF-00722] c15 N70-40204  
Reliable electrical element heater using plural wire system and backup power sources  
[NASA-CASE-MFS-21462-1] c33 N74-14935
- BACKWARD WAVES**  
Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c33 N81-24348
- BACTERIA**  
Decontamination of petroleum products with honey  
[NASA-CASE-XNP-03835] c06 N71-23499  
Portable tester for monitoring bacterial contamination by adenosine triphosphate light reaction  
[NASA-CASE-GSC-10879-1] c14 N72-25413  
Enzymatic luminescent bioassay method for determining bacterial levels in urine  
[NASA-CASE-GSC-11092-2] c04 N73-27052  
Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c37 N74-13178  
Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c51 N76-29891  
Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c51 N78-22585  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750  
Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c51 N80-16714
- BACTERIOLOGY**  
Detection of bacteria in biological fluids and foods  
[NASA-CASE-GSC-11533-1] c14 N73-13435  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c51 N77-22794  
Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c51 N77-27677
- BAFFLES**  
Light radiation direction indicator with baffle of two parallel grids

- [NASA-CASE-XNP-03930] c14 N69-24331  
 Light baffle with oblate hemispheroid surface  
 and shading flange  
 [NASA-CASE-NPO-16337] c14 N71-15604  
 Flexible ring slosh damping baffle for  
 spacecraft fuel tank  
 [NASA-CASE-LAR-10317-1] c32 N71-16103  
 Submerged fuel tank baffles to prevent sloshing  
 in liquid propellant rocket flight  
 [NASA-CASE-XLA-04605] c32 N71-16106  
 Floating baffle for tank drain  
 [NASA-CASE-KSC-10639] c15 N73-26472  
 System for the measurement of ultra-low stray  
 light levels --- determining the adequacy of  
 large space telescope systems  
 [NASA-CASE-MFS-23513-1] c74 N79-11865
- BAGS**  
 Pecal waste disposal container  
 [NASA-CASE-XMS-06761] c05 N69-23192  
 Gas diffusion liquid storage bag and method of  
 use for storing blood  
 [NASA-CASE-NPO-13930-1] c52 N79-14749
- BAKING**  
 Bakeable McLeod gauge  
 [NASA-CASE-XGS-01293-1] c35 N79-33450
- BALANCE**  
 Thermoprotective device for balances  
 [NASA-CASE-XAC-06648] c14 N70-40400  
 Device for monitoring a change in mass in  
 varying gravimetric environments  
 [NASA-CASE-MFS-21556-1] c35 N74-26945
- BALANCING**  
 Automatic balancing device for use on  
 frictionless supported attitude-controlled  
 test platforms  
 [NASA-CASE-LAR-10774] c10 N71-13545  
 Force balanced throttle valve for fuel control  
 in rocket engines  
 [NASA-CASE-NFO-10808] c15 N71-27432  
 Static force balancing system attached to  
 lifting body  
 [NASA-CASE-LAR-10348-1] c11 N73-12264
- BALL BEARINGS**  
 Combination guide and rotary bearing for freely  
 moving shaft  
 [NASA-CASE-XLA-00013] c15 N71-29136  
 Method for reducing mass of ball bearings for  
 long life operation at high speed  
 [NASA-CASE-LEW-10856-1] c15 N72-22490  
 Low mass rolling element bearing assembly  
 [NASA-CASE-LEW-11087-1] c15 N73-30458  
 Hollow rolling element bearings  
 [NASA-CASE-LEW-11087-3] c37 N74-21064  
 Drilled ball bearing with a one piece  
 anti-tipping cage assembly  
 [NASA-CASE-LEW-11925-1] c37 N75-31446  
 Spherical bearing --- to reduce vibration effects  
 [NASA-CASE-MFS-23447-1] c37 N79-11404
- BALLAST (MASS)**  
 Inflatable stabilizing system for use on life  
 raft to reduce rocking and preclude capsizing  
 [NASA-CASE-MSC-12393-1] c02 N73-26006
- BALLASTS (IMPEDANCES)**  
 Apparatus for ballasting high frequency  
 transistors  
 [NASA-CASE-XGS-05003] c09 N69-24318
- BALLISTICS**  
 Fiber modified polyurethane foam for ballistic  
 protection  
 [NASA-CASE-ABC-10714-1] c27 N76-15310
- BALLOON SOUNDING**  
 Apparatus for controlling the temperature of  
 balloon-borne equipment  
 [NASA-CASE-GSC-11620-1] c34 N74-23039
- BALLOONS**  
 Development and characteristics of hot air  
 balloon deceleration and recovery system  
 [NASA-CASE-XLA-06824-2] c02 N71-11037  
 Inflation system for balloon type satellites  
 [NASA-CASE-XGS-03351] c31 N71-16081  
 System for controlling torque buildup in  
 suspension of gondola connected to balloon by  
 parachute shroud lines  
 [NASA-CASE-GSC-11077-1] c02 N73-13008
- BALLS**  
 Two axis flight controller with potentiometer  
 control shafts directly coupled to rotatable  
 ball members  
 [NASA-CASE-XFR-04104] c03 N70-42073
- Quartz ball valve  
 [NASA-CASE-NPO-14473-1] c37 N80-23654
- BANDPASS FILTERS**  
 Helical coaxial resonator RF filter  
 [NASA-CASE-XGS-02816] c07 N69-24323  
 Phase locked demodulator with bandwidth  
 switching amplifier circuit  
 [NASA-CASE-XNP-01107] c10 N71-28859  
 Signal to noise ratio determination circuit  
 using bandpass limiter  
 [NASA-CASE-GSC-11239-1] c10 N73-25241  
 Selective bandpass resonators using bandstop  
 resonator pairs for microwave frequency  
 operation  
 [NASA-CASE-GSC-10990-1] c09 N73-26195  
 Dichroic plate --- as bandpass filters  
 [NASA-CASE-NPO-13506-1] c35 N76-15435  
 Notch filter  
 [NASA-CASE-MFS-23303-1] c32 N77-18307  
 Adaptive polarization separation  
 [NASA-CASE-LAR-12196-1] c33 N81-26358  
 Tuned analog network --- bandpass filter networks  
 [NASA-CASE-GSC-12650-1] c33 N82-10324
- BANDWIDTH**  
 Improvements in receiver of narrow bandwidth  
 television system  
 [NASA-CASE-XMS-06740-1] c07 N71-26579  
 Self-tuning electronic filter for maintaining  
 constant bandwidth and center frequency gain  
 [NASA-CASE-ARC-10264-1] c09 N73-20231  
 Turnstile and flared cone UHF antenna  
 [NASA-CASE-LAR-10970-1] c33 N76-14372  
 Independent gain and bandwidth control of a  
 traveling wave maser  
 [NASA-CASE-NFO-13801-1] c36 N78-18410  
 Inductorless narrow-band filter/amplifier  
 [NASA-CASE-GSC-12410-1] c33 N79-24260  
 Dual band combiner for horn antenna  
 [NASA-CASE-NPC-14519-1] c32 N80-23524
- BARIUM**  
 Chemical system for releasing barium to create  
 ion clouds in upper atmosphere and  
 interplanetary space  
 [NASA-CASE-LAR-10670-1] c06 N73-30097
- BARIUM COMPOUNDS**  
 Improved cathode containing barium carbonate  
 block and heated tungsten screen for electron  
 bombardment ion thruster  
 [NASA-CASE-XLF-07087] c06 N69-39889
- BARIUM FLUORIDES**  
 Production of barium fluoride-calcium fluoride  
 composite lubricant for bearings or seals  
 [NASA-CASE-XLE-08511-2] c18 N71-16105
- BARIUM ION CLOUDS**  
 Rocket having barium release system to create  
 ion clouds in the upper atmosphere  
 [NASA-CASE-LAR-10670-2] c15 N74-27360
- BARIUM TITANATES**  
 Memory device employing semiconductor and  
 ferroelectric properties of single crystal  
 barium titanate  
 [NASA-CASE-EBC-10307] c08 N72-21198
- BARRIER LAYERS**  
 Schottky barrier solar cell  
 [NASA-CASE-NFO-13689-2] c44 N81-29525
- BARRIERS**  
 Short range laser obstacle detector --- for  
 surface vehicles using laser diode array  
 [NASA-CASE-NPO-11856-1] c36 N74-15145
- BARS**  
 Satellite retrieval system  
 [NASA-CASE-MFS-25403-1] c18 N81-24164
- BASES (CHEMICAL)**  
 Low concentration alkaline solution treatment of  
 aluminum with metal phosphate surface coatings  
 to improve chemical bonding and reduce coating  
 weight  
 [NASA-CASE-XLA-01995] c18 N71-23047
- BATTERY CHARGERS**  
 Battery charging system with cell to cell  
 voltage balance  
 [NASA-CASE-XGS-05432] c03 N71-19438  
 Alkaline-type coulometer cell for primary charge  
 control in secondary battery recharge circuits  
 [NASA-CASE-XGS-05434] c03 N71-20491  
 Development and characteristics of battery  
 charging circuits with coulometer for control  
 of available current  
 [NASA-CASE-GSC-10487-1] c03 N71-24719

- Method and apparatus for conditioning of nickel-cadmium batteries  
[NASA-CASE-NFS-23270-1] c44 N78-25531
- BAYARD-ALPERT IONIZATION GAGES**  
Describing hot filament type Bayard-Alpert ionization gage with ion collector buried or removed from grid structure  
[NASA-CASE-XLA-07424] c14 N71-18482
- BEADS**  
Rotary bead dropper and selector for testing micrometeorite transducers  
[NASA-CASE-XGS-03304] c09 N71-22988
- BEAM LEADS**  
Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c33 N74-12951
- BEAM SPLITTERS**  
Optical range finder using reflective first surfaces mirror and transmitting beam splitter  
[NASA-CASE-MSC-12105-1] c14 N72-21409
- Laser extensometer  
[NASA-CASE-MFS-19259-1] c36 N78-14380
- Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c35 N78-18395
- Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c73 N78-32848
- Interferometer  
[NASA-CASE-NPO-14502-1] c74 N81-17888
- Dual-beam skin friction interferometer --- portable equipment  
[NASA-CASE-ARC-11354-1] c36 N81-29415
- BEAM SWITCHING**  
Using electron beam switching for brushless motor commutation  
[NASA-CASE-XGS-01451] c09 N71-10677
- Antenna array at focal plane of reflector with coupling network for beam switching  
[NASA-CASE-GSC-10220-1] c07 N71-27233
- Dish antenna having switchable beamwidth --- with truncated concave ellipsoid subreflector  
[NASA-CASE-GSC-11760-1] c33 N75-19516
- Single frequency, two feed dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11968-1] c32 N76-15329
- Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c33 N76-27472
- BEAM WAVEGUIDES**  
Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications  
[NASA-CASE-HQN-10541-2] c15 N71-27135
- Optical communication system with gas filled waveguide for laser beam transmission  
[NASA-CASE-HQN-10541-4] c16 N71-27183
- Laser beam projector for continuous, precise alignment between target, laser generator, and astronomical telescope during tracking  
[NASA-CASE-NPO-11087] c23 N71-29125
- Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c33 N80-18287
- Multiprism collimator  
[NASA-CASE-GSC-12608-1] c35 N81-12387
- BEAMS (RADIATION)**  
Method and means for recording and reconstructing holograms without use of reference beam  
[NASA-CASE-ERC-10020] c16 N71-26154
- Method and system for transmitting and distributing optical frequency radiation  
[NASA-CASE-HQN-10541-3] c23 N72-23695
- Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c32 N80-24510
- Scannable beam forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c32 N80-28578
- Collimated beam manifold and method for using the same --- laser beams  
[NASA-CASE-MFS-25312-1] c74 N80-34251
- Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c36 N81-12407
- Side-looking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c36 N81-19439
- BEAMS (SUPPORTS)**  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c31 N81-12283
- Foldable beam  
[NASA-CASE-LAR-12077-1] c31 N81-25259
- BEARING (DIRECTION)**  
Light radiation direction indicator with baffle of two parallel grids  
[NASA-CASE-XNF-03930] c14 N69-24331
- Solar radiation direction detector and device for compensating degradation of photocells  
[NASA-CASE-XLA-00183] c14 N70-40239
- Michelson interferometer with photodetector for optical direction sensing  
[NASA-CASE-NPO-10320] c14 N71-17655
- Omnidirectional liquid filled accelerometer design with liquid and housing temperature compensation  
[NASA-CASE-HQN-10780] c14 N71-30265
- Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c04 N77-19056
- Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c36 N81-24422
- System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-PRC-11005-1] c06 N82-16075
- BEARINGS**  
Metal alloy bearing materials for space applications  
[NASA-CASE-XLF-05033] c15 N71-23810
- Low friction bearing and lock mechanism for two-axis gimbal carrying satellite payload  
[NASA-CASE-GSC-10556-1] c31 N71-26537
- Measuring device for bearing preload using spring washers  
[NASA-CASE-MFS-20434] c11 N72-25288
- Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c37 N75-18574
- Magnetic bearing system  
[NASA-CASE-GSC-11978-1] c37 N77-17464
- Hydrostatic bearing support  
[NASA-CASE-LEW-11158-1] c37 N77-28486
- Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c37 N77-32500
- Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c37 N77-32501
- Method of making bearing material  
[NASA-CASE-LEW-11930-3] c24 N80-33482
- Linear magnetic bearings --- active magnetic suspension of armatures  
[NASA-CASE-GSC-12582-1] c37 N81-16469
- Antenna grout replacement system  
[NASA-CASE-NPO-15205-1] c37 N81-19457
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c33 N81-22279
- Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c37 N81-22359
- BEDS (PROCESS ENGINEERING)**  
Catalyst bed element removing tool  
[NASA-CASE-XFE-00811] c15 N70-36901
- BEER LAW**  
Multichannel photoionization chamber for measuring absorption, photoionization yield, and coefficients of gases  
[NASA-CASE-ERC-10044-1] c14 N71-27090
- BES**  
Decontamination of petroleum products with honey  
[NASA-CASE-XNP-03835] c06 N71-23499
- BELLOWS**  
Compact bellows spirometer for high speed and high altitude space travel  
[NASA-CASE-XAR-01547] c05 N69-21473
- Electrical connection for printed circuits on common board, using bellows principle in rivet  
[NASA-CASE-XNP-05082] c15 N70-41960
- Flexible bellows joint shielding sleeve for propellant transfer pipelines  
[NASA-CASE-XNP-01855] c15 N71-28937
- Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c37 N75-19686
- BELTS**  
Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c31 N74-32917
- BENDING**  
Method and apparatus for bowing of instrument panels to improve radio frequency shielded enclosure  
[NASA-CASE-XNF-09422] c07 N71-19436

Development of systems for automatically and continually suppressing or attenuating bending motion in elastic bodies  
 [NASA-CASE-XAC-05632] c32 N71-23971

Elbow forming in jacketed pipes while maintaining separation between core shape and jacket pipes  
 [NASA-CASE-XNP-10475] c15 N71-24679

Device for bending metal ribbon or wire  
 [NASA-CASE-XLA-05966] c15 N72-12408

**BENDING DIAGRAMS**

Charged particle analyzer with periodically varying voltage applied across electrostatic deflection members  
 [NASA-CASE-XAC-05506-1] c24 N71-16095

**BENDING FATIGUE**

Apparatus for testing metallic and nonmetallic beams or rods by bending at high temperatures in vacuum or inert atmosphere  
 [NASA-CASE-XLE-01300] c15 N70-41993

Cryostat for flexure fatigue testing of composite materials  
 [NASA-CASE-XNF-02964] c14 N71-17659

**BENDING MOMENTS**

Launch pad missile release system with bending moment change rate reduction in thrust distribution structure at liftoff  
 [NASA-CASE-XMF-02198] c30 N70-40353

**BENDING VIBRATION**

Mercury filled pendulum damper for controlling bending vibration induced by wind effects  
 [NASA-CASE-LAR-1C274-1] c14 N71-17626

**BENZENE**

Para-benzoquinone dioxime and concentrated mineral acid processed to yield intumescent or fire resistant, heat insulating materials  
 [NASA-CASE-ABC-10304-1] c18 N73-26572

**BERYLLIUM ALLOYS**

Development of fluoride coating to prevent oxidation of beryllium surfaces at elevated temperatures  
 [NASA-CASE-LEW-10327] c17 N71-33408

**BERYLLIUM HYDRIDES**

Inhibited solid propellant composition containing beryllium hydride  
 [NASA-CASE-NFO-10866-1] c28 N79-14228

**BERYLLIUM OXIDES**

High temperature beryllium oxide capacitor  
 [NASA-CASE-LEW-11938-1] c33 N76-15373

**BIAS**

Electrical self-aligning connector  
 [NASA-CASE-NFS-25211-1] c33 N80-32651

**BIMETALS**

Nonmagnetic thermal motor for magnetometer movement  
 [NASA-CASE-XAR-03786] c09 N69-21313

Design and development of linear actuator based on bimetallic spring expansion  
 [NASA-CASE-NPO-10637] c15 N72-12409

Application of spiral, bimetallic strip to create circular motion on mechanical shaft by changing strip temperature  
 [NASA-CASE-NPO-11283] c09 N72-25260

Development of thermal compensating structure which maintains uniform length with changes in temperature  
 [NASA-CASE-MFS-20433] c15 N72-28496

Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
 [NASA-CASE-ABC-10441-1] c35 N74-15126

Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
 [NASA-CASE-LEW-12050-1] c35 N77-32454

**BINARY CODES**

Time division relay synchronizer with master sync pulse for activating binary counter to produce signal identifying time slot for station  
 [NASA-CASE-GSC-10373-1] c07 N71-19773

Logic circuit for generating multibit binary code word in parallel  
 [NASA-CASE-XNP-04623] c10 N71-26103

Design and development of encoder/decoder system to generate binary code which is function of outputs of plurality of bistable elements  
 [NASA-CASE-NPO-10342] c10 N71-33407

Binary coded sequential acquisition ranging system for distance measurements  
 [NASA-CASE-NPO-11194] c08 N72-25209

Binary concatenated coding system  
 [NASA-CASE-MSC-14082-1] c60 N76-23850

Multiple rate digital command detection system with range clean-up capability  
 [NASA-CASE-NPO-13753-1] c32 N77-20289

Pseudo noise code and data transmission method and apparatus  
 [NASA-CASE-GSC-12017-1] c32 N77-30308

Binary to binary coded decimal converter  
 [NASA-CASE-GSC-12044-1] c60 N78-17691

Apparatus and method for stabilized phase detection for binary signal tracking loops  
 [NASA-CASE-MSC-16461-1] c33 N79-11313

**BINARY DATA**

Nondestructive interrogating and state changing circuit for binary magnetic storage elements  
 [NASA-CASE-XGS-00174] c08 N70-34743

Logic circuit to ripple add and subtract binary counters for spaceborne computers  
 [NASA-CASE-XGS-04766] c08 N71-18602

Describing circuit for obtaining sum of squares of numbers  
 [NASA-CASE-XGS-04765] c08 N71-18693

Digital synchronizer for extracting binary data in receiver of PSK/PCM communication system  
 [NASA-CASE-NPO-10851] c07 N71-24613

Differential phase shift keyed communication system  
 [NASA-CASE-MSC-14065-1] c32 N74-26654

Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
 [NASA-CASE-GSC-11743-1] c32 N75-24981

Binary to binary coded decimal converter  
 [NASA-CASE-GSC-12044-1] c60 N78-17691

**BINARY DIGITS**

Logarithmic converter for compressing 19-digit binary input number to 8-digit output  
 [NASA-CASE-XLA-00471] c08 N70-34778

Circuit diagram and operation of full binary adder  
 [NASA-CASE-XGS-00689] c08 N70-34787

Binary number sorter for arranging numbers in order of magnitude  
 [NASA-CASE-NFC-10112] c08 N71-12502

Binary sequence detector with few memory elements and minimized logic circuit complexity  
 [NASA-CASE-XNP-05415] c08 N71-12505

Cathode ray tube system for displaying ones and zeros in binary wave train  
 [NASA-CASE-XGS-04987] c08 N71-20571

Characteristics of comparator circuits for comparison of binary numbers in information processing system  
 [NASA-CASE-XNP-04819] c08 N71-23295

Digital converter for scaling binary number to binary coded decimal number of higher multiple  
 [NASA-CASE-KSC-10595] c08 N73-12176

Family of m-ary linear feedback shift register with binary logic  
 [NASA-CASE-NFC-11868] c10 N73-20254

Binary concatenated coding system  
 [NASA-CASE-MSC-14082-1] c60 N76-23850

**BINARY FLUIDS**

Flow measuring apparatus  
 [NASA-CASE-LEW-12078-1] c35 N75-30503

**BINARY TO DECIMAL CONVERTERS**

Binary to binary-coded decimal converter using single set of logic circuits notwithstanding number of shift register decades  
 [NASA-CASE-XNP-00432] c08 N70-35423

Design and operation of high speed binary to decimal conversion system  
 [NASA-CASE-XGS-01230] c08 N71-19544

Binary to decimal decoder logic circuit design with feedback control and display device  
 [NASA-CASE-XKS-06167] c08 N71-24890

High speed direct binary to binary coded decimal converter for use in PCM telemetry systems  
 [NASA-CASE-KSC-10326] c08 N72-21197

Binary to binary coded decimal converter  
 [NASA-CASE-GSC-12044-1] c60 N78-17691

**BINDERS (MATERIALS)**

Bonded solid lubricant coatings of calcium fluoride and binder for high temperature stability  
 [NASA-CASE-XMS-00259] c18 N70-36400

Brazing alloy binder  
 [NASA-CASE-XMF-05868] c26 N75-27125

- Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c24 N79-31347
- BINOCLULARS**  
Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c74 N77-20882
- BIOASSAY**  
Spectrophotofluorometer with 3-dimensional display to identify fluorescence spectra of carcinogenic and noncarcinogenic hydrocarbons  
[NASA-CASE-XGS-01231] c14 N70-41676  
Bioassay of flavin coenzymes  
[NASA-CASE-GSC-10565-1] c06 N72-25149  
Enzymatic luminescent bioassay method for determining bacterial levels in urine  
[NASA-CASE-GSC-11092-2] c04 N73-27052  
Amino acid analysis  
[NASA-CASE-NFO-12130-1] c25 N75-14844  
Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c35 N75-25123  
Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c51 N76-25891  
Automated clinical system for chromosome analysis  
[NASA-CASE-NFO-13913-1] c52 N79-12694  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750  
Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c51 N80-16714
- BIODYNAMICS**  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772  
Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c54 N81-15699
- BIOELECTRIC POTENTIAL**  
Electrochemically reversible silver-silver chloride electrode for detecting bioelectric potential differences generated by human muscles and organs  
[NASA-CASE-XMS-02872] c05 N69-21925  
Manufacturing process for making perspiration resistant-stress resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c05 N72-25120  
Process for control of cell division  
[NASA-CASE-LAR-10773-3] c51 N77-25769
- BIOELECTRICITY**  
Development and characteristics of electrodes in which poisoning by organic molecules is prevented by ion selective electrolytic deposition of hydrophilic protein colloid  
[NASA-CASE-XMS-04213-1] c09 N71-26002  
Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c51 N81-28698
- BIOENGINEERING**  
Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c33 N74-21851  
Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c52 N77-14735  
Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c52 N77-14738  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772  
Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c52 N81-14612  
Urine collection device  
[NASA-CASE-MSC-16433-1] c52 N81-24711  
Biomedical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c52 N81-24717  
Low X-ray absorption aneurism clips  
[NASA-CASE-LAR-12650-1] c52 N81-29768
- BIOINSTRUMENTATION**  
Temperature compensated solid state differential amplifier with application in bioinstrumentation circuits  
[NASA-CASE-XAC-00435] c09 N70-35440  
Electrode attached to helmets for detecting low level signals from skin of living creatures  
[NASA-CASE-ARC-10043-1] c05 N71-11193  
Characteristics of pressed disc electrode for biological measurements  
[NASA-CASE-XMS-04212-1] c05 N71-12346  
Development of apparatus and method for quantitatively measuring brain activity as automatic indication of sleep state and level of consciousness  
[NASA-CASE-MSC-13282-1] c05 N71-24729
- Development and characteristics of electrodes in which poisoning by organic molecules is prevented by ion selective electrolytic deposition of hydrophilic protein colloid  
[NASA-CASE-XMS-04213-1] c09 N71-26002  
Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c52 N74-20726  
Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NFO-13423-1] c33 N75-31329  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NFO-13643-1] c52 N76-29896  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c52 N76-33835  
Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c52 N77-10780  
Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c52 N77-25772  
Corneal seal device  
[NASA-CASE-LBW-12258-1] c52 N77-28716  
Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c52 N77-28717  
Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c52 N79-18580  
Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c52 N80-18691  
Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c52 N80-23969  
Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c51 N80-27067  
Simultaneous muscle force and displacement transducer  
[NASA-CASE-NFO-14212-1] c52 N80-27072  
An implantable electrical device  
[NASA-CASE-GSC-12560-1] c52 N80-27073  
Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-1] c52 N81-33804  
Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c52 N82-11770
- BIOLUMINESCENCE**  
Detection instrument for light emitted from ATP biochemical reaction  
[NASA-CASE-XGS-05534] c23 N71-16355  
Describing method for lyophilization of luciferase containing mixtures for use in life detection reactions  
[NASA-CASE-XGS-05532] c06 N71-17705  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c51 N77-22794  
Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c51 N78-22585
- BIOMEDICAL DATA**  
Silicon radiation detecting probe design for in vivo biomedical use  
[NASA-CASE-XMS-01177] c05 N71-19440  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c52 N79-26771
- BIOMETRICS**  
Characteristics of pressed disc electrode for biological measurements  
[NASA-CASE-XMS-04212-1] c05 N71-12346  
Compressible electrolyte saturated sponge electrode for biomedical applications  
[NASA-CASE-MSC-13648] c05 N72-27103  
Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c52 N74-20726  
Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c52 N74-27566  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c52 N76-33835  
Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c52 N79-18580  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c52 N79-26771

- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c52 N80-27C72
- Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c52 N81-20703
- Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c52 N81-29763
- Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-1] c52 N81-33804
- BIOTELEMETRY**
- Biotelemetry apparatus with dual voltage generators for implanting in animals  
[NASA-CASE-XAC-05706] c05 N71-12342
- Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c52 N74-26625
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14180-1] c52 N76-14757
- Accelerometer telemetry system  
[NASA-CASE-ARC-10849-1] c17 N76-29347
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c52 N76-29894
- BIPOLAR TRANSISTORS**
- Voltage regulator for battery power source --- using a bipolar transistor  
[NASA-CASE-FRC-10116-1] c33 N79-23345
- BIREFRINGENCE**
- Automatic polarimeter capable of measuring transient birefringence changes in electro-optic materials  
[NASA-CASE-XNP-08883] c23 N71-16101
- BISMUTH**
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c76 N79-16678
- BISMUTH COMPOUNDS**
- Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c35 N75-13213
- BISTABLE CIRCUITS**
- Bistable multivibrator circuits operating at high speed and low power dissipation  
[NASA-CASE-XGS-00823] c10 N71-15910
- BIT SYNCHRONIZATION**
- Telemetry data unit to form multibit words for use between demodulator and computer  
[NASA-CASE-XNP-09225] c09 N69-24333
- Bit synchronization system using digital data transition tracking phased locked loop  
[NASA-CASE-NPO-10844] c07 N72-20140
- Bit synchronization of PCM communications signal, without separate synchronization channel by digital correlation  
[NASA-CASE-NPO-11302-1] c07 N73-13149
- Method and apparatus for a single channel digital communications system --- synchronization of received PCM signal by digital correlation with reference signal  
[NASA-CASE-NPO-11302-2] c52 N74-10132
- BINARY CODE**
- Encoders designed to generate comma free biorthogonal Reed-Muller type code comprising conversion of 64 6-bit words into 64 32-bit data for communication purposes  
[NASA-CASE-NPO-10595] c10 N71-25917
- BITS**
- Logic circuit for generating multibit binary code word in parallel  
[NASA-CASE-XNP-04623] c10 N71-26103
- MOD 2 sequential function generator for multibit sequence, with two-bit shift register for each pair of bits  
[NASA-CASE-NPO-10636] c08 N72-25210
- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c32 N79-10263
- BLACK BODY RADIATION**
- Development of black-body source calibration furnace  
[NASA-CASE-XLF-01399] c33 N71-15625
- Black body cavity radiometer with thermal resistance wire bridge circuit  
[NASA-CASE-XNP-08961] c14 N71-24809
- Black body radiometer design with temperature sensing and cavity heat source cone winding  
[NASA-CASE-XNP-09701] c14 N71-26475
- Black body radiometer having isothermally surrounded cavity for ultraviolet, visible, and infrared radiation  
[NASA-CASE-NPC-10810] c14 N71-27323
- BLADDER**
- Prosthetic urinary sphincter  
[NASA-CASE-MPS-23717-1] c52 N81-25660
- BLADE TIPS**
- Modification and improvement of turbine blades for maximum cooling efficiency  
[NASA-CASE-XLF-00092] c15 N70-33264
- BLADES**
- Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c37 N78-10468
- BLADES (CUTTERS)**
- Piston in bore cutter for severing parachute control lines and sealing cable hole to prevent water leakage into load  
[NASA-CASE-XMS-04072] c15 N70-42017
- Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c52 N78-14773
- BLAST LOADS**
- Development of apparatus for detonating explosive devices in order to determine forces generated and detonation propagation rate  
[NASA-CASE-LAR-10800-1] c33 N72-27959
- BLOCKS**
- Rotary target V-block --- aligning wind tunnel apparatus for optical measurement  
[NASA-CASE-LAR-12007-2] c74 N79-25876
- BLOOD**
- Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c52 N75-15270
- Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c52 N79-14749
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c52 N80-14687
- BLOOD FLOW**
- Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c52 N82-11770
- BLOOD PRESSURE**
- Blood pressure measuring system for separately recording dc and ac pressure signals of Korotkoff sounds  
[NASA-CASE-XMS-06061] c05 N71-23317
- Apparatus and method for processing Korotkov sounds --- for blood pressure measurement  
[NASA-CASE-MSC-13999-1] c52 N74-26626
- Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c52 N74-27566
- Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c54 N75-13531
- Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-1] c52 N81-33804
- BLOOD VESSELS**
- Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-1] c52 N81-33804
- BLUFF BODIES**
- Bluff-shaped annular configuration for supersonic decelerator for reentry vehicles  
[NASA-CASE-XLF-00222] c02 N70-37939
- BLUNT BODIES**
- Wind tunnel method for simulating flow fields around blunt vehicles entering planetary atmospheres without involving high temperatures  
[NASA-CASE-LAR-11138] c12 N71-20436
- BODIES OF REVOLUTION**
- Conforming polisher for aspheric surfaces of revolution with inflatable tube  
[NASA-CASE-XGS-02884] c15 N71-22705
- Test fixture for measuring moment of inertia of irregularly shaped body with multiple axes  
[NASA-CASE-XGS-01023] c14 N71-22992
- BODY FLUIDS**
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c52 N74-22771
- Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c51 N76-29891
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c51 N81-14605
- BODY KINEMATICS**
- Space suit with improved waist and torso movement  
[NASA-CASE-ARC-10275-1] c05 N72-22092



- Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c37 N79-28551
- Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c54 N81-15699
- BODY MEASUREMENT (BIOLOGY)**
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c52 N76-33835
- Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c52 N79-18580
- Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c54 N81-15699
- Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c52 N81-24716
- BODY TEMPERATURE**
- Thermoregulating with cooling flow pipe network for humans  
[NASA-CASE-XMS-10269] c05 N71-24147
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c52 N76-25894
- BODY VOLUME (BIOLOGY)**
- Whole body measurement systems --- for weightlessness simulation  
[NASA-CASE-MSC-13972-1] c52 N74-10575
- Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c52 N81-24716
- BODY-WING CONFIGURATIONS**
- Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c05 N79-12061
- BOILERS**
- Vapor generating boiler system for turbine motor  
[NASA-CASE-XLE-00785] c33 N71-16104
- Shell-side liquid metal boiler employing tube and shell heat exchanger  
[NASA-CASE-NPO-10831] c33 N72-20915
- BOLOMETERS**
- High impedance alternating current sensing transformer device between two bolometers for measuring insertica loss of test component  
[NASA-CASE-XNP-01193] c10 N71-16057
- Thin film capacitive bolometer and capacitance temperature interchange sensor  
[NASA-CASE-NFO-10607] c09 N71-27232
- Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c35 N79-33449
- BOLTS**
- Patent data on gas actuated bolt disconnect assembly  
[NASA-CASE-XLA-00326] c03 N70-34667
- Bolt-latch mechanism for releasing despin weights from space vehicle  
[NASA-CASE-XLA-00679] c15 N70-38601
- Gage for quality control of sealing surfaces of threaded bcss  
[NASA-CASE-XMF-04966] c14 N71-17658
- Split nut and bolt separation device  
[NASA-CASE-XNP-06914] c15 N71-21489
- Device for securing together structural members with axially stretched bolt and nut  
[NASA-CASE-GSC-11149-1] c15 N73-30457
- BONDING**
- Silver chloride use in technique for fusion bonding of graphite to silver, glass, ceramics, and certain other metals  
[NASA-CASE-XGS-00963] c15 N69-39735
- Bonded joint and method --- for reducing peak shear stress in adhesive bonds  
[NASA-CASE-LAR-10900-1] c37 N74-23064
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c24 N75-30260
- Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c27 N76-14264
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 N79-24431
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c24 N79-25143
- Improved attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MSC-18741-1] c16 N81-16110
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c24 N81-33235
- BONES**
- Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c35 N75-12271
- Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c52 N77-14737
- Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c27 N78-17215
- BOOMS (EQUIPMENT)**
- Unfolding boom assembly with knuckle joints for positioning equipment for spacecraft  
[NASA-CASE-XGS-00938] c32 N70-41367
- Collapsible antenna boom and coaxial transmission line having inflatable inner tube  
[NASA-CASE-MFS-20068] c07 N71-27191
- Extendable, self-deploying boom apparatus  
[NASA-CASE-GSC-10566-1] c15 N72-18477
- Design and characteristics of mechanically extended and telescoping boom on crane assembly  
[NASA-CASE-NFC-11118] c03 N72-25021
- BOOSTER RECOVERY**
- Techniques for recovery of multistage rocket vehicles by providing lifting surfaces on individual sections  
[NASA-CASE-XMF-J0389] c31 N70-34176
- Recoverable, reusable single stage booster capable of injecting large payloads into circular earth orbit  
[NASA-CASE-XMF-01973] c31 N70-41588
- Orbiter/launch system  
[NASA-CASE-LAR-12250-1] c14 N81-26161
- BOOSTER ROCKET ENGINES**
- Segmented back-up bar for butt welding large tubular structures such as rocket booster bodies or tanks  
[NASA-CASE-XMF-00640] c15 N70-39924
- Recoverable, reusable single stage booster capable of injecting large payloads into circular earth orbit  
[NASA-CASE-XMF-01973] c31 N70-41588
- BOOTS (FOOTWEAR)**
- Walking boot assembly  
[NASA-CASE-ARC-11101-1] c54 N78-17675
- BORIDES**
- Cesium thermionic converters having improved electrodes  
[NASA-CASE-LEW-12038-3] c44 N78-25555
- BORING MACHINES**
- Automatic controlled drive mechanism for portable boring bar  
[NASA-CASE-XLA-03661] c15 N71-33518
- Borehole geological assessment  
[NASA-CASE-NPC-14231-1] c46 N80-10709
- BORON**
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c76 N74-20329
- BORON CARBIDES**
- Catalyst for increased growth of boron carbide crystal whiskers  
[NASA-CASE-XHC-03903] c15 N69-21922
- BORON FLUORIDES**
- Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c27 N78-31233
- BOUNDARY LAYER CONTROL**
- Double hinged flap for boundary layer control over trailing edges of wings  
[NASA-CASE-XLA-01290] c02 N70-42016
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c02 N81-14968
- BOUNDARY LAYER SEPARATION**
- Tertiary flow injection system for thrust vectoring of propulsive nozzle flow  
[NASA-CASE-MFS-20831] c28 N71-29153
- Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c20 N76-14190
- Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c05 N79-24976
- BOUNDARY LAYER TRANSITION**
- Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c02 N80-20224
- BOUNDARY LAYERS**
- Flow meter for measuring stagnation pressure in boundary layer around high speed flight vehicle

- [NASA-CASE-XFR-02007] c12 N71-24692  
Development of thermocouple instrument for  
measuring temperature of wall heated by  
flowing fluid without disturbing boundary layer  
[NASA-CASE-XLE-05230] c14 N72-27410
- BOXES (CONTAINERS)**  
Sealed storage container for channel carriers  
with mounted miniature electronic components  
[NASA-CASE-MFS-20075] c09 N71-26133
- BRACKETS**  
Electrical servo actuator bracket --- fuel  
control valves on jet engines  
[NASA-CASE-FRC-11044-1] c37 N81-33483
- BRAKES (FOR ARRESTING MOTION)**  
Energy dissipating shock absorbing system for  
land payload recovery or vehicle braking  
[NASA-CASE-XLA-06754] c15 N70-34850  
Automatic braking device for rapidly  
transferring humans or materials from elevated  
location  
[NASA-CASE-XKS-07814] c15 N71-27067  
Sprag solenoid brake --- development and  
operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c37 N74-26976  
Steel safety brake  
[NASA-CASE-GSC-11960-1] c37 N77-14479  
Motion restraining device  
[NASA-CASE-NPO-13619-1] c37 N78-16369
- BRAKING**  
Direct current electromotive system for  
regenerative braking of electric motor  
[NASA-CASE-XMF-01056] c10 N71-16030  
Linear magnetic braking system with nonuniformly  
wrapped primary coil producing constant  
braking force on secondary coil  
[NASA-CASE-XLE-05079] c15 N71-17652  
Anemometer with braking mechanism to prevent  
rotation of wind driven elements  
[NASA-CASE-XMF-05224] c14 N71-23726
- BRAZING**  
Anti-wettable materials brazing processes using  
titanium and zirconium for surface pretreatment  
[NASA-CASE-XMS-03537] c15 N69-21471  
Application techniques for protecting materials  
during salt bath brazing  
[NASA-CASE-XLE-00046] c15 N70-33311  
Joining aluminum to stainless steel by bonding  
aluminum coatings onto titanium coated  
stainless steel and brazing aluminum to  
aluminum/titanium coated steel  
[NASA-CASE-MFS-07369] c15 N71-20443  
Brazing alloy adapted for brazing corrosion  
resistant steel to refractory metals, also for  
brazing refractory metals to other refractory  
metals  
[NASA-CASE-XNP-03063] c17 N71-23365  
Brazing alloy binder  
[NASA-CASE-XMF-05868] c26 N75-27125  
Brazing alloy composition  
[NASA-CASE-XMF-06053] c26 N75-27126  
Brazing alloy  
[NASA-CASE-XNP-03878] c26 N75-27127  
Method of fluxless brazing and diffusion bonding  
of aluminum containing components  
[NASA-CASE-MSC-14435-1] c37 N76-18455
- BREATHING APPARATUS**  
Three-port transfer valve with one port open  
continuously suitable for manned space flight  
[NASA-CASE-XAC-01158] c15 N71-23051  
Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c54 N76-24900  
Portable breathing system --- a breathing  
apparatus using a rebreathing system of heat  
exchangers for carbon dioxide removal  
[NASA-CASE-MSC-16182-1] c54 N80-10799
- BRICKS**  
Development of construction block in form of  
container folded from flat sheet and filled  
with solid material for architectural purposes  
[NASA-CASE-MSC-12233-2] c32 N73-13921
- BRIGHTNESS**  
Modulating and controlling intensity of light  
beam from high temperature source by  
servocontrolled rotating cylinders  
[NASA-CASE-XMS-04300] c09 N71-19479
- BRIGHTNESS DISCRIMINATION**  
Video signal processing system for sampling  
video brightness levels  
[NASA-CASE-NPO-10140] c07 N71-24742
- Automated visual sensitivity tester for  
determining visual field sensitivity and blind  
spot size  
[NASA-CASE-ARC-10329-1] c05 N73-26072  
Illumination control apparatus for compensating  
solar light  
[NASA-CASE-KSC-11010-1] c74 N79-12890
- BRITTLENESS**  
Rock sampling --- apparatus for controlling  
particle size  
[NASA-CASE-XNP-10007-1] c46 N74-23068  
Rock sampling --- method for controlling  
particle size distribution  
[NASA-CASE-XNP-09755] c46 N74-23069
- BROADBAND**  
Broadband chokes and absorbers to reduce  
spurious radiation patterns of antenna array  
caused by support structures  
[NASA-CASE-XMS-05303] c07 N69-27462  
Flexible monopole antenna with broad bandwidth  
and low voltage standing wave ratio  
[NASA-CASE-MSC-12101] c09 N71-18720  
Broadband frequency discriminator with resistive  
captive inductive networks  
[NASA-CASE-NPC-10096] c07 N71-24583  
Broadband microwave waveguide window to  
compensate dielectric material filling  
[NASA-CASE-XNF-08880] c09 N71-24808  
Comb type traveling wave maser amplifier for  
improved high gain broadband output  
[NASA-CASE-NPO-10548] c16 N71-24831  
Wideband voltage controlled oscillator with high  
phase stability  
[NASA-CASE-XLA-03893] c10 N71-27271  
Multimode antenna feed system for microwave and  
broadband communication  
[NASA-CASE-GSC-11046-1] c07 N73-28013  
Multifrequency broadband polarized horn antenna  
[NASA-CASE-NFO-14588-1] c32 N81-25278
- BROADBAND AMPLIFIERS**  
Solid state broadband stable power amplifier  
[NASA-CASE-XNP-10854] c10 N71-26331  
Broadband distribution amplifier with  
complementary pair transistor output stages  
[NASA-CASE-NPO-10003] c10 N71-26415
- BROADCASTING**  
Vehicle locating system utilizing AM  
broadcasting station carriers  
[NASA-CASE-NFO-13217-1] c32 N75-26194
- BROMINE**  
Hydrogen-bromine secondary battery  
[NASA-CASE-NPC-13237-1] c44 N76-18641
- BRUSHES**  
Fabrication of sintered impurity semiconductor  
brushes for electrical energy transfer  
[NASA-CASE-XMF-01016] c26 N71-17818
- BUCKLING**  
Miniature vibration isolator utilizing elastic  
tubing material  
[NASA-CASE-XLA-01019] c15 N70-40156  
Test equipment to prevent buckling of small  
diameter specimens during compression tests  
[NASA-CASE-LAR-10440-1] c14 N73-32323
- BUFFER STORAGE**  
Data handling based on source significance,  
storage availability, and data received from  
source  
[NASA-CASE-XNP-04162-1] c08 N70-34675  
Data acquisition and processing system with  
buffer storage and timing device for magnetic  
tape recording of PCM data and timing  
information  
[NASA-CASE-NPO-12107] c08 N71-27255  
Digital to analog converter with parallel  
input/output memory device  
[NASA-CASE-KSC-10397] c08 N72-25206  
Common data buffer system --- communication with  
computational equipment utilized in spacecraft  
operations  
[NASA-CASE-KSC-11048-1] c62 N81-24779
- BUFFERS (CHEMISTRY)**  
Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c25 N82-11147
- BUILDINGS**  
Apparatus and method of assembling building  
blocks by folding pre-cut flat sheets of  
material during on-site construction  
[NASA-CASE-MSC-12233-1] c15 N72-25454

**BULBS**

External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c36 N79-14362

**BULKHEADS**

Liquid propellant tank design with semitoroidal bulkhead  
[NASA-CASE-XMF-01899] c31 N70-41948

**BUOYANCY**

Inflatable radar reflector unit - lightweight, highly reflective to electromagnetic radiation, and adaptable for erection and deployment with minimum effort and time  
[NASA-CASE-XMS-00893] c07 N70-40063

**BURNING RATE**

Pressurized gas injection for burning rate control of solid propellants  
[NASA-CASE-XLE-03494] c27 N71-21819  
Development of apparatus for testing burning rate and flammability of materials  
[NASA-CASE-XMS-05690] c33 N72-25913  
Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c28 N78-31255

**BURNOUT**

Spherical solid propellant rocket engine having abrupt burnout  
[NASA-CASE-XHQ-01897] c28 N70-35381

**BURNS (INJURIES)**

Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c52 N81-27783

**BUTT JOINTS**

Channel-type shell construction for rocket engines and related configurations  
[NASA-CASE-XLE-00144] c28 N70-34860  
Segmented back-up bar for butt welding large tubular structures such as rocket booster bodies or tanks  
[NASA-CASE-XMF-00640] c15 N70-39924  
Apparatus for welding sheet material --- butt joints  
[NASA-CASE-XMS-01330] c37 N75-27376

**BUTTERFLY VALVES**

Flexible inflatable seal for butterfly valves  
[NASA-CASE-XLE-00101] c15 N70-33376

**BYPASSES**

Low power drain transistor feedback circuit  
[NASA-CASE-XGS-04999] c09 N69-24317  
Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c07 N69-24323  
Current regulating voltage divider design with load current shunting  
[NASA-CASE-MFS-20935] c09 N71-34212  
Electrical interconnection of unilluminated solar cells in solar battery array  
[NASA-CASE-GSC-10344-1] c03 N72-27053  
Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c33 N78-17296

**C****CABLE FORCE RECORDERS**

Design and characteristics of device for showing amount of cable payed out from winch and load imposed  
[NASA-CASE-MSC-12052-1] c15 N71-24599

**CABLES**

Cable guide and restraint device for reefing tubes in uniform manner  
[NASA-CASE-LAR-10129-1] c15 N73-25512  
Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c37 N76-22540

**CABLES (ROPES)**

High voltage cable for use in high intensity ionizing radiation fields  
[NASA-CASE-XNP-00738] c09 N70-38201  
Force separation rigid tethering device using cables  
[NASA-CASE-XLA-02332] c32 N71-17609  
Support for flexible conductor cable between drawers or racks holding electronic equipment and cabinet assembly housing drawers or racks  
[NASA-CASE-XMF-07587] c15 N71-18701  
Design and construction of satellite appendage tie-down cord  
[NASA-CASE-XGS-02554] c31 N71-21064  
Quick attach mechanism for moving or stationary wires, ropes, or cables

[NASA-CASE-XFR-05421] c15 N71-22994  
Flexible cable that can be made rigid  
[NASA-CASE-MSC-13512-1] c15 N72-22485  
Guide member for stabilizing cable of open shaft elevator  
[NASA-CASE-KSC-10513] c15 N72-25453  
Reefing system  
[NASA-CASE-LAR-10129-2] c37 N74-20063  
Emergency descent device  
[NASA-CASE-MFS-23074-1] c54 N77-21844  
Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c37 N80-32717

**CADMIUM SULFIDES**

High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c35 N74-18088  
CdS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c35 N80-20559

**CALCIUM**

Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c35 N75-12271

**CALCIUM FLUORIDES**

Bonded solid lubricant coatings of calcium fluoride and binder for high temperature stability  
[NASA-CASE-XMS-00259] c18 N70-36400  
Production of barium fluoride-calcium fluoride composite lubricant for bearings or seals  
[NASA-CASE-XLE-08511-2] c18 N71-16105

**CALCIUM OXIDES**

Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c25 N79-10162

**CALCIUM PHOSPHATES**

Process for preparing calcium phosphate salts for tooth repair  
[NASA-CASE-ERC-10338] c04 N72-33072

**CALCULATORS**

Sun angle calculator  
[NASA-CASE-MSC-12617-1] c35 N76-29552

**CALIBRATING**

Development and characteristics of self-calibrating displacement transducer for measuring magnitude and frequency of displacement of bodies  
[NASA-CASE-XLA-00781] c09 N71-22999  
Combination pressure transducer-calibrator assembly for measuring fluid  
[NASA-CASE-XNP-01660] c14 N71-23036  
Control system for pressure balance device used in calibrating pressure gages  
[NASA-CASE-XMF-04134] c14 N71-23755  
Phonocardiogram simulator producing electrical voltage waves to control amplitude and duration between simulated sounds  
[NASA-CASE-XKS-10804] c05 N71-24606  
Calibrator for measuring and modulating or demodulating laser outputs  
[NASA-CASE-XLA-03410] c16 N71-25914  
Plastic sphere for radar tracking and calibration  
[NASA-CASE-XLA-11154] c07 N72-21117  
Calibration of vacuum gauges for measuring total and partial pressures in ultrahigh vacuum region  
[NASA-CASE-XGS-07752] c14 N73-30390  
System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c35 N74-13132  
In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c35 N74-15092  
Ergometer calibrator --- for any ergometer utilizing rotating shaft  
[NASA-CASE-MFS-21045-1] c35 N75-15932  
Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c35 N76-15432  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c35 N76-24523  
Electronically scanned pressure sensor module with in SITU calibration capability  
[NASA-CASE-LAR-12230-1] c35 N79-14347  
Calibrating pressure switch  
[NASA-CASE-XMF-04494-1] c33 N79-33392  
Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c32 N80-14281  
Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c34 N81-26402

- Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c35 N81-33449
- CALORIMETERS**  
Development and characteristics of calorimeter with integral heat sink for maintenance of constant temperature  
[NASA-CASE-XMF-04208] c33 N71-29051  
Heat flow calorimeter --- measures output of Ni-Cd batteries  
[NASA-CASE-GSC-11434-1] c34 N74-27859  
Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c35 N81-19426
- CAMERA SHUTTERS**  
Electrically operated rotary shutter for television camera aboard spacecraft  
[NASA-CASE-XNP-00637] c14 N70-40273  
Magnetically opened diaphragm design with camera shutter and expansion tube applications  
[NASA-CASE-XLA-03660] c15 N71-21060  
Development and characteristics of cyclically operable, optical shutter for use as focal plane shutter for transmitting single radiation pulses  
[NASA-CASE-NPO-10758] c14 N73-14427  
Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly --- for use with cameras mounted in satellites  
[NASA-CASE-GSC-11560-1] c33 N74-20861
- CAMERAS**  
Mechanism for measuring nanosecond time differences between luminous events using streak camera  
[NASA-CASE-XLA-01987] c23 N71-23976  
Camera adapter design for image magnification including lens and illuminator  
[NASA-CASE-XMF-03844-1] c14 N71-26474  
Longitudinal film gate and lock mechanism for securing film in motion picture cameras under vibration and high acceleration loads  
[NASA-CASE-LAR-10686] c14 N71-28935  
Design and characteristics of laser camera system with diffusion filter of small particles with average diameter larger than wavelength of laser light  
[NASA-CASE-NPO-10417] c16 N71-33410  
Optical scanner with linear housing and rotating camera  
[NASA-CASE-NPO-11002] c14 N72-22441  
Apparatus for on-film optical recording of camera lens aperture and focus setting  
[NASA-CASE-MSC-12363-1] c14 N73-26431  
Mechanical exposure interlock device for preventing film overexposure in oscilloscope camera  
[NASA-CASE-LAR-10319-1] c14 N73-32322  
Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c35 N74-17153  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11243-1] c35 N75-15014  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c35 N75-19613  
Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c35 N75-27328  
Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MFS-22517-1] c35 N76-18402
- CANS**  
Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c37 N77-27400  
Can-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c07 N79-14095
- CANARD CONFIGURATIONS**  
Thrust and attitude control apparatus using jet nozzle in movable canard surface or fin configuration  
[NASA-CASE-XLE-03583] c31 N71-17629  
Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c05 N78-32086
- CANCER**  
Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c52 N79-14751
- CANOPIES**  
Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c27 N76-16230
- Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c05 N81-24047
- CANS**  
Design and characteristics of device for closing canisters under high vacuum conditions  
[NASA-CASE-XLA-01446] c15 N71-21528  
Extrusion can for extruding ceramics under heat and pressure  
[NASA-CASE-NFO-10812] c15 N73-13464
- CANTILEVER BEAMS**  
Pneumatic cantilever beams and platform for space erectable structure  
[NASA-CASE-XLA-01731] c32 N71-21045  
Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c37 N79-10418
- CANTILEVER MEMBERS**  
Deployable cantilever support for deploying solar cell arrays aboard spacecraft and reducing transient loading  
[NASA-CASE-NFO-10883] c31 N72-22874  
Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c35 N77-14407
- CAPACITANCE**  
Capacitance measuring device for determining flare accuracy on tapered tubes  
[NASA-CASE-XKS-03495] c14 N69-39785  
Device for measuring two orthogonal components of force with gallium flotation of measuring target for use in vacuum environments  
[NASA-CASE-XAC-04885] c14 N71-23790  
Thin film capacitive bolometer and capacitance temperature interchange sensor  
[NASA-CASE-NFO-10607] c09 N71-27232  
Capacitive tank gaging device for monitoring one constituent of two phase fluid by sensing dielectric constant  
[NASA-CASE-MFS-21629] c14 N72-22442  
Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NFC-11948-1] c33 N74-32712  
Direct reading inductance meter  
[NASA-CASE-NFC-13792-1] c35 N77-32455  
Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNF-02899-1] c33 N79-21265
- CAPACITANCE SWITCHES**  
Electric discharge apparatus for electrohydraulic explosive forming  
[NASA-CASE-XMF-00375] c15 N70-34249  
Extra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit  
[NASA-CASE-XGS-00381] c09 N70-34819  
Feedback integrating circuit with grounded capacitor for signal processing  
[NASA-CASE-XAC-10607] c10 N71-23669
- CAPACITORS**  
Temperature sensitive capacitor device for detecting very low intensity infrared radiation  
[NASA-CASE-XNP-09750] c14 N69-39937  
Electrical power system for space flight vehicles operating over extended periods  
[NASA-CASE-XMF-00517] c03 N70-34157  
Capacitor for measuring density of compressible fluid in liquid, gas, or liquid and gas phases  
[NASA-CASE-XLE-00143] c14 N70-36618  
Capacitor sandwich structure containing metal sheets of known thickness for counting penetration rates of meteoroids  
[NASA-CASE-XLE-01246] c14 N71-10797  
Capacitor fabrication by solidifying mixture of ferromagnetic metal particles, nonferromagnetic particles, and dielectric material  
[NASA-CASE-LEW-10364-1] c09 N71-13522  
Mechanism for measuring nanosecond time differences between luminous events using streak camera  
[NASA-CASE-XLA-01987] c23 N71-23976  
Circuit for monitoring power supply by ripple current indication  
[NASA-CASE-KSC-10162] c09 N72-11225  
Thermodielectric radiometer using polymer film as capacitor  
[NASA-CASE-ARC-10138-1] c14 N72-24477  
Material compositions and processes for developing dielectric thick films used in microcircuit capacitors  
[NASA-CASE-LAR-10294-1] c26 N72-28762

- micrometeoroid analyzer using arrays of interconnected capacitors and ion detector  
[NASA-CASE-ARC-10443-1] c14 N73-20477
- Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MSC-14339-1] c05 N75-24716
- High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c33 N76-15373
- Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c44 N78-24608
- Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c33 N78-32341
- Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c33 N79-21265
- CAPILLARY FLOW**
- Capillary radiator for carrying heat transfer liquid in planetary spacecraft structures  
[NASA-CASE-XLB-03307] c33 N71-14035
- Lubrication for bearings by capillary action from oil reservoir of porous material  
[NASA-CASE-XNP-03972] c15 N71-23048
- Soldering device particularly suited to making high quality wiring joints for aerospace engineering utilizing capillary attraction to regulate flow of solder  
[NASA-CASE-XLA-08911] c15 N71-27214
- Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c37 N76-27568
- Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c34 N81-22310
- CAPILLARY TUBES**
- Tubular flow restrictor for gas flow control in pipeline  
[NASA-CASE-NPO-10117] c15 N71-15608
- Development of liquid separating system using capillary device connected to flexible bladder storage chamber  
[NASA-CASE-XNS-13052] c14 N71-20427
- Interrupter switching device utilizing electrodes and mercury filled capillary tubes in which current flow vaporizes mercury as circuit breaker  
[NASA-CASE-XNP-02251] c12 N71-20896
- Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c36 N76-18428
- CARBAZOLES**
- Method of producing output voltage from photovoltaic cell using poly-N-vinyl carbazole complexed with iodine  
[NASA-CASE-NPO-10373] c03 N71-18698
- CARBOHYDRATES**
- Decontamination of petroleum products with honey  
[NASA-CASE-XNP-03835] c06 N71-23499
- CARBON**
- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c24 N78-27184
- Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c25 N82-12166
- CARBON ARCS**
- Water cooled contactors for holding rotating carbon arc anode  
[NASA-CASE-XNS-03700] c15 N69-24266
- CARBON COMPOUNDS**
- Vapor deposited laminated nitride-silicon coating for corrosion prevention of carbonaceous surfaces  
[NASA-CASE-XLA-00284] c15 N71-16075
- Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c25 N79-11152
- CARBON DIOXIDE**
- Carbon dioxide purge systems to prevent condensation in spaces between cryogenic fuel tanks and hypersonic vehicle skin  
[NASA-CASE-XLA-01967] c31 N70-42015
- Fast response miniature carbon dioxide detector with no moving parts for measuring concentration in any atmosphere  
[NASA-CASE-MSC-13332-1] c14 N72-21408
- Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c52 N79-21750
- CARBON DIOXIDE LASERS**
- Repetitively pulsed wavelength selective carbon dioxide laser  
[NASA-CASE-ERC-10178] c16 N71-24832
- Performance of ac power supply developed for CO2 laser system  
[NASA-CASE-GSC-11222-1] c16 N73-32391
- Stark-effect modulation of CO2 laser with NH2D  
[NASA-CASE-NPO-11945-1] c36 N76-18427
- Tunable injection-locked pulsed CO2 laser  
[NASA-CASE-NPO-14984-1] c36 N81-15350
- CARBON DIOXIDE REMOVAL**
- Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c25 N74-12813
- Regenerable device for scrubbing breathable air of CO2 and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c54 N77-32722
- Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MSC-16182-1] c54 N80-10799
- CARBON FIBER REINFORCED PLASTICS**
- Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c24 N79-16915
- Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c37 N80-28711
- Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c27 N81-17260
- CARBON MONOXIDE**
- Carbon monoxide monitor --- using real time operation  
[NASA-CASE-MFS-22060-1] c35 N75-29380
- CARBONATES**
- Chemical and physical properties of synthetic polyurethane polymer prepared by reacting hydroxy carbonate with organic diisocyanate  
[NASA-CASE-MFS-10512] c06 N73-30099
- Synthesis of dawsonites  
[NASA-CASE-ARC-113261-1] c25 N80-31490
- CARBONIZATION**
- Method of carbonizing polyacrylonitrile fibers and resulting product  
[NASA-CASE-ARC-11261-1] c24 N81-29164
- CARBONYL COMPOUNDS**
- Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c25 N81-33246
- CARBORANE**
- Process for the preparation of polycarbonylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c27 N81-27271
- CARBOXYL GROUP**
- Carboxyl terminated polyester prepolymers and foams produced from prepolymers and materials  
[NASA-CASE-NPO-10596] c06 N71-25929
- CARBOXYLIC ACIDS**
- Stable polyimide synthesis from mixtures of monomeric diazines and polycarboxylic acid esters  
[NASA-CASE-LEW-11325-1] c06 N73-27980
- Fluorinated esters of polycarboxylic acid and lubricating compositions for use at extreme temperature  
[NASA-CASE-MFS-21040-1] c06 N73-30098
- CARCINOGENS**
- Spectrophotofluorometer with 3-dimensional display to identify fluorescence spectra of carcinogenic and noncarcinogenic hydrocarbons  
[NASA-CASE-XGS-01231] c14 N70-41676
- CARDIAC VENTRICLES**
- Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c52 N79-10724
- CARDIOGRAPHY**
- Digital cardiometer incorporating circuit for measuring heart rate of subject over predetermined portion of one minute also converting rate to beats per minute  
[NASA-CASE-XNS-02399] c05 N71-22896
- Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c54 N75-27760
- CARDIOLOGY**
- Development of instantaneous reading tachometer for measuring electrocardiogram signal rate  
[NASA-CASE-MFS-20418] c14 N73-24473

- Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c52 N76-29895
- CARDIOTACHOMETERS**  
Digital computing cardiometer  
[NASA-CASE-MFS-20284-1] c52 N74-12778
- CARDIOVASCULAR SYSTEM**  
Conditioning suit for normal function of astronaut cardiovascular system in gravity environment  
[NASA-CASE-XLA-02898] c05 N71-20268  
Ear oximeter for monitoring blood oxygenation and pressure, pulse rate, and pressure pulse curve, using dc and ac amplifiers  
[NASA-CASE-XAC-05422] c04 N71-23185  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c52 N76-29896  
Low X-ray absorption aneurism clips  
[NASA-CASE-LAR-12650-1] c52 N81-25768
- CARRIER FREQUENCIES**  
Demodulator for simultaneous demodulation of two modulating ac signal carriers close in frequency  
[NASA-CASE-XMF-01160] c07 N71-11298  
Automatic carrier acquisition system for phase locked loop receiver  
[NASA-CASE-NPO-11628-1] c67 N73-30113  
Demodulator for carrier transducers  
[NASA-CASE-MUC-10107-1] c33 N74-17930  
Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c32 N74-20811
- CARRIER WAVES**  
Variable frequency subcarrier oscillator with temperature compensation  
[NASA-CASE-XNP-03916] c09 N71-28810  
Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c32 N75-24981
- CARRIERS**  
Sealed storage container for channel carriers with mounted miniature electronic components  
[NASA-CASE-MFS-20075] c09 N71-26133  
Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c34 N74-27744
- CARTESIAN COORDINATES**  
Design and development of random function tracer for obtaining coordinates of points on contour maps  
[NASA-CASE-XLA-01401] c15 N71-21179
- CARTRIDGES**  
Tape cartridge with high capacity storage of endless-loop magnetic tape  
[NASA-CASE-XGS-00769] c14 N70-41647  
Endless loop tape transport mechanism for driving and tensioning recording medium in magnetic tape recorder  
[NASA-CASE-XGS-01223] c07 N71-10609  
Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c25 N74-12813
- CASCADE CONTROL**  
Reversible ring counter using cascaded single silicon controlled rectifier stages  
[NASA-CASE-XGS-01473] c09 N71-10673  
Synchronous dc direct-drive system comprising multiple-loop hybrid control system controlling load directly connected to actuator  
[NASA-CASE-GSC-10065-1] c10 N71-27136  
Multiloop RC active filter network with low parameter sensitivity and low amplifier gain  
[NASA-CASE-ARC-10192] c09 N72-21245
- CASCADE FLOW**  
Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c07 N76-18117
- CASE BONDED PROPELLANTS**  
Solid propellant motor  
[NASA-CASE-NPO-11458A] c20 N78-32179
- CASES (CONTAINERS)**  
Nonmagnetic hermetically sealed battery case made of epoxy resin and woven glass tape for use with electrochemical cells in spacecraft  
[NASA-CASE-XGS-00886] c03 N71-11053  
Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c73 N75-30876
- Portable heatable container  
[NASA-CASE-NPO-14237-1] c44 N80-20808
- CASSEGRAIN ANTENNAS**  
Cassegrain antenna subreflector flange for suppressing ground noise and increasing antenna transmitting efficiency  
[NASA-CASE-XNP-00683] c09 N70-35425  
Design and operation of multi-feed cone Cassegrain antenna  
[NASA-CASE-NFO-10539] c07 N71-11285  
Synchronous detection system for detecting weak radio astronomical signals  
[NASA-CASE-XNP-09832] c30 N71-23723  
Dual frequency feed systems for Cassegrainian antennas  
[NASA-CASE-NPO-13091-1] c09 N73-12214  
Low loss dichroic plate  
[NASA-CASE-NFO-13171-1] c32 N74-11000
- CASTING**  
Hydraulic apparatus for casting and molding of liquid polymers  
[NASA-CASE-XNP-07659] c06 N71-22975  
Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c31 N81-16327  
Asymmetric polyimide separation membrane and method  
[NASA-CASE-NPO-15431-1] c25 N81-29178
- CASTINGS**  
Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c37 N76-23570  
Castable high temperature refractory materials  
[NASA-CASE-LEW-13080-2] c27 N82-11210
- CATALYSIS**  
Unit for generating thrust from catalytic decomposition of hydrogen peroxide, for high altitude aircraft or spacecraft reaction control  
[NASA-CASE-XMS-00583] c28 N70-38504  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c25 N77-32255  
Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NPO-13849-1] c28 N80-10374  
Diesel engine catalytic combustor system --- turbocharging  
[NASA-CASE-LEW-12995-1] c37 N80-26659
- CATALYSTS**  
Catalyst for increased growth of boron carbide crystal whiskers  
[NASA-CASE-XHQ-03903] c15 N69-21922  
Catalyst bed element removing tool  
[NASA-CASE-XPR-00811] c15 N70-36901  
Catalyst bed ignition system for hydrazine propellants  
[NASA-CASE-XNP-00876] c28 N70-41311  
Development of device for detecting hydrogen in ambient environments  
[NASA-CASE-MFS-11537] c14 N71-20442  
Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c25 N74-12813  
Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c25 N80-16116
- CATHETERIZATION**  
Transducer circuit design with single coaxial cable for input and output connections including incorporation into miniaturized catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c52 N76-29896  
Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c52 N81-27786
- CATHODE RAY TUBES**  
Cathode ray oscilloscope for analyzing electrical waveforms representing amplitude distribution of time function  
[NASA-CASE-XNP-01383] c09 N71-10659  
Cathode ray tube system for displaying ones and zeros in binary wave train  
[NASA-CASE-XGS-04987] c08 N71-20571  
Indexing mechanism for cathode array substitution in electron beam tube  
[NASA-CASE-NPC-10625] c09 N71-26182

- Color television system utilizing single gun  
current sensitive color cathode ray tube  
[NASA-CASE-ERC-10098] c09 N71-28618
- Cathode ray tube with coating of phosphor and  
cobalt oxides  
[NASA-CASE-ERC-10468] c09 N72-20206
- Digital video system for displaying image and  
alphanumeric data on cathode ray tube  
[NASA-CASE-NPO-11342] c09 N72-25248
- Switching circuit for control of cathode ray  
tube beam with fast rise time for output signal  
[NASA-CASE-KSC-10647-1] c10 N72-31273
- Situational display system of cathode ray tubes  
to assist pilot in aircraft control  
[NASA-CASE-ERC-10350] c14 N73-20474
- Very high intensity light source using a cathode  
ray tube --- electron beams  
[NASA-CASE-XNP-01296] c33 N75-27250
- CATHODES**
- Encapsulated heater forming hollow body for  
cathode used in ion thruster  
[NASA-CASE-LEW-10814-1] c28 N70-35422
- Electronic cathodes for use in electron  
bombardment ion thrusters  
[NASA-CASE-XLF-04501] c09 N71-23190
- Design and characteristics of heat activated  
electric cell with anode made from one or more  
alkali metals and cathode made from oxidizing  
material  
[NASA-CASE-LEW-11358] c03 N71-26084
- Characteristics of ion rocket engine with  
combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c28 N73-24783
- Storage battery comprising negative plates of a  
wedge shaped configuration --- for preventing  
shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c44 N74-19693
- CATIONS**
- Water insoluble, cationic permselective membrane  
[NASA-CASE-NPO-11091] c18 N72-22567
- Viscoelastic cationic polymers containing the  
urethane linkage  
[NASA-CASE-NPO-10830-1] c27 N81-15104
- CAVITATION FLOW**
- Semitoroidal diaphragm cavitating flow control  
valve  
[NASA-CASE-XNP-09704] c12 N71-18615
- CAVITIES**
- Black body radiometer having isothermally  
surrounded cavity for ultraviolet, visible,  
and infrared radiation  
[NASA-CASE-NFO-10810] c14 N71-27323
- Method for coating through-holes in ceramic  
substrates used in fabricating miniaturized  
electronic circuits  
[NASA-CASE-XMF-05999] c15 N71-29032
- Soil burrowing mole apparatus  
[NASA-CASE-XNP-07169] c15 N73-32362
- Method of constructing dished ion thruster grids  
to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c20 N76-21276
- Method of making hollow elastomeric bodies  
[NASA-CASE-NPO-13535-1] c37 N76-31524
- Method and apparatus for producing concentric  
hollow spheres --- inertial confinement fusion  
targets  
[NASA-CASE-NPO-14596-1] c31 N81-33319
- Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c32 N82-11336
- CAVITY RESONATORS**
- Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c07 N69-24323
- Semiconductor in resonant cavity for improving  
signal to noise ratio of communication receiver  
[NASA-CASE-MSC-12259-1] c07 N70-12616
- Thermally sensitive tuning probe for nullifying  
detuning effects in microwave cavity resonator  
of amplifier  
[NASA-CASE-XNP-00449] c14 N70-35220
- Holder for high frequency crystal resonators  
[NASA-CASE-XNP-03637] c15 N71-21311
- Superconductive resonant cavity for improved  
signal to noise ratio in communication signal  
[NASA-CASE-MSC-12259-2] c07 N72-33146
- Infrared tunable dye laser with nonlinear  
wavelength mixing crystal in optical cavity  
[NASA-CASE-ARC-10463-1] c09 N73-32111
- Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c36 N74-11313
- Laser apparatus  
[NASA-CASE-GSC-12237-1] c36 N80-14384
- Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c36 N81-12407
- CELESTIAL BODIES**
- Device for determining relative angular position  
of spacecraft and radiating celestial body  
[NASA-CASE-GSC-11444-1] c14 N73-28490
- Position determination systems --- using orbital  
antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c17 N76-21250
- CELESTIAL NAVIGATION**
- Development of star intensity measuring system  
which minimizes effects of outside interference  
[NASA-CASE-XNP-06510] c14 N71-23797
- CELL ANODES**
- Heat activated emf cells with aluminum anode  
[NASA-CASE-LEW-11359] c03 N71-28579
- Heat activated cell with aluminum anode  
[NASA-CASE-LEW-11359-2] c03 N72-20034
- Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c44 N77-14581
- CELL DIVISION**
- Process for control of cell division  
[NASA-CASE-LAR-10773-3] c51 N77-25769
- CELLS**
- Separation cell with permeable membranes for  
fluid mixture component separation  
[NASA-CASE-XMS-02952] c18 N71-20742
- CELLS (BIOLOGY)**
- System for and method of freezing biological  
tissue  
[NASA-CASE-GSC-12173-1] c51 N79-10694
- Method for separating biological cells ---  
suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c51 N80-16715
- Electrophoresis device  
[NASA-CASE-MFS-25426-1] c25 N81-29179
- CENTRAL PROCESSING UNITS**
- Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c60 N79-27864
- CENTRIFUGAL COMPRESSORS**
- Centrifugal-reciprocating compressor  
[NASA-CASE-NFO-14597-1] c37 N79-23431
- CENTRIFUGAL FORCE**
- Counter pumping debris excluder and separator  
--- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c07 N78-25090
- CENTRIFUGES**
- Centrifuge mounted motion simulator with  
elevator mechanism  
[NASA-CASE-XAC-00399] c11 N70-34815
- Liquid-gaseous centrifugal separator for  
weightlessness environment  
[NASA-CASE-XLA-00415] c15 N71-16079
- Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c34 N74-30608
- Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c34 N75-26282
- Biocentrifuge system capable of exchanging  
specimen cages while in operational mode  
[NASA-CASE-MFS-23825-1] c51 N81-32829
- CERAMIC BONDING**
- Plasma spraying gun for forming diffusion bonded  
metal or ceramic coatings on substrates  
[NASA-CASE-XLE-01604-2] c15 N71-15610
- Method of forming ceramic to metal seals  
impervious to gaseous and liquid mercury at  
high temperature  
[NASA-CASE-XNP-01263-2] c15 N71-26312
- CERAMIC COATINGS**
- Evaporating crucible of tantalum-tungsten foil,  
nickel alumina bonding agent, and ceramic  
coating  
[NASA-CASE-XLA-03105] c15 N69-27483
- Unfired-ceramic, highly reflective composite  
insulation for large launch vehicles  
[NASA-CASE-XMF-01030] c18 N70-41583
- Unfired ceramic insulation for protection from  
radiant heating environments  
[NASA-CASE-MFS-14253] c33 N71-24858
- Cermet for nuclear fuel constructed by pressing  
metal coated ceramic particles in die at  
temperature to cause bonding of metal  
coatings, and tested for thermal stability  
[NASA-CASE-LEW-10219-1] c18 N71-28729
- Two-component ceramic coating for silica  
insulation  
[NASA-CASE-MSC-14270-1] c27 N76-22377



- Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c27 N76-23426
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190
- Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-13359-1] c27 N81-24265
- CERAMIC NUCLEAR FUELS**
- Cermet for nuclear fuel constructed by pressing metal coated ceramic particles in die at temperature to cause bonding of metal coatings, and tested for thermal stability  
[NASA-CASE-LEW-10219-1] c18 N71-28729
- CERAMICS**
- Transpiration cooled turbine blade made from metallic or ceramic wires  
[NASA-CASE-XLE-00020] c15 N70-33226
- Characteristics of foamed-in-place ceramic refractory insulating material and method of fabrication  
[NASA-CASE-XGS-02435] c18 N71-22998
- Process for fiberizing ceramic materials with high fusion temperatures and tensile strength  
[NASA-CASE-XNP-00597] c18 N71-23088
- Method for coating through-holes in ceramic substrates used in fabricating miniaturized electronic circuits  
[NASA-CASE-XMF-05999] c15 N71-29032
- Extrusion can for extruding ceramics under heat and pressure  
[NASA-CASE-NPO-10812] c15 N73-13464
- Thermal shock resistant hafnia ceramic materials  
[NASA-CASE-LAR-10894-1] c18 N73-14584
- Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206
- High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c27 N78-19302
- Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c27 N79-12221
- High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c27 N79-14213
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c37 N80-24619
- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c37 N81-24446
- Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c37 N81-25371
- Castable high temperature refractory materials  
[NASA-CASE-LEW-13080-2] c27 N82-11210
- CEREBROSPINAL FLUID**
- Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c52 N81-27786
- CERMETS**
- Freeze casting of metal ceramic and refractory compound powders into plastic slips  
[NASA-CASE-XLE-00106] c15 N71-16076
- Cermet for nuclear fuel constructed by pressing metal coated ceramic particles in die at temperature to cause bonding of metal coatings, and tested for thermal stability  
[NASA-CASE-LEW-10219-1] c18 N71-28729
- Cermet composition and method of fabrication --- heat resistant alloys and powders  
[NASA-CASE-NPO-13120-1] c27 N76-15311
- High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c27 N77-13217
- High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c27 N78-19302
- High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c27 N79-14213
- CESIUM**
- Heated tungsten filter for removing oxygen impurities from cesium  
[NASA-CASE-XNP-04262-2] c17 N71-26773
- Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c25 N76-27383
- CESIUM DIODES**
- Oxygen-doped tantalum emitter for thermionic devices such as cesium vapor diodes  
[NASA-CASE-NPO-11138] c03 N70-34646
- Thermionic cesium diode converter with cavity emitters  
[NASA-CASE-NFO-10412] c09 N71-28421
- Improved thermionic energy converters  
[NASA-CASE-LEW-12443-1] c44 N81-19561
- CESIUM ENGINES**
- Variable thrust ion engine using thermal decomposition of solid cesium compound to produce propulsive vapor  
[NASA-CASE-XMF-00923] c28 N70-36802
- Method for producing porous tungsten plates for ionizing cesium compounds for propulsion of ion engines  
[NASA-CASE-XLE-00455] c28 N70-38197
- CESIUM VAPOR**
- Electric power generation system directory from laser power  
[NASA-CASE-NFO-13308-1] c36 N75-30524
- Cesium thermionic converters having improved electrodes  
[NASA-CASE-LEW-12038-3] c44 N78-25555
- CHANNEL FLOW**
- Fabrication method for lightweight regeneratively cooled combustion chamber of channel construction  
[NASA-CASE-XLE-00150] c28 N70-41818
- Heated element sensor for fluid flow detection in thermal conductive conduit with adaptive means to determine flow rate and direction  
[NASA-CASE-MSC-12084-1] c12 N71-17569
- CHANNELS (DATA TRANSMISSION)**
- Error correction circuitry for binary signal channels  
[NASA-CASE-XNF-03263] c09 N71-18843
- Helical recorder for multiple channel recording  
[NASA-CASE-GSC-10614-1] c09 N72-11224
- Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
[NASA-CASE-NFC-13321-1] c32 N75-26195
- Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c60 N79-27864
- High-speed data link for moderate distances and noisy environments  
[NASA-CASE-NPO-14152-1] c32 N80-18252
- CHARACTER RECOGNITION**
- Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c33 N76-18353
- System and method for character recognition  
[NASA-CASE-NPO-11337-1] c74 N81-19896
- CHARGE COUPLED DEVICES**
- CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c33 N79-17134
- Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c43 N79-17288
- CCD correlated quadruple sampling processor  
[NASA-CASE-NFC-14426-1] c33 N81-27396
- Programmable scan/read circuitry for charge coupled device imaging detectors --- for a startracker  
[NASA-CASE-NFO-15345-1] c33 N81-27403
- CHARGE DISTRIBUTION**
- Operation of vidicon tube for scanning spatial charge density pattern  
[NASA-CASE-XNP-06028] c09 N71-23189
- Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c33 N77-21314
- CHARGE EXCHANGE**
- Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c20 N77-10148
- CHARGE TRANSFER**
- Electronic counter circuit utilizing magnetic core and low power consumption  
[NASA-CASE-XNP-08836] c09 N71-12515
- Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c35 N78-17359
- CHARGE TRANSFER DEVICES**
- Charge transfer reaction laser with

preionization means  
[NASA-CASE-NFO-13945-1] c36 N78-27402

Time delay and integration detectors using  
charge transfer devices  
[NASA-CASE-GSC-12324-1] c33 N81-33403

**CHARGED PARTICLES**  
Method of forming thin window drifted silicon  
charged particle detector  
[NASA-CASE-XLE-00808] c24 N71-10560

Charged particle analyzer with periodically  
varying voltage applied across electrostatic  
deflection members  
[NASA-CASE-XAC-05506-1] c24 N71-16095

Electrostatic charged particle collector  
containing stacked electrodes for microwave tube  
[NASA-CASE-LEW-11192-1] c09 N73-13208

Method and apparatus for neutralizing potentials  
induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c33 N77-10429

**CHARGING**  
Development of device for simulating charge and  
discharge cycle of battery in synchronous orbit  
[NASA-CASE-GSC-11211-1] c03 N72-25020

**CHARRING**  
Sensor device with switches for measuring  
surface recession of charring and noncharring  
ablaters  
[NASA-CASE-XLA-01781] c14 N69-39975

Ablation sensor for measuring char layer  
recession rate using electric wires  
[NASA-CASE-XLA-01794] c33 N71-21586

**CHASSIS**  
Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c37 N79-33467

**CHECKOUT**  
Digital computer system for automatic prelaunch  
checkout of spacecraft  
[NASA-CASE-XKS-08012-2] c31 N71-15566

Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c44 N76-14601

Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c33 N81-26359

**CHELATES**  
Ammonium perchlorate composite propellant with  
organic Cu/II/ chelate catalytic additive  
[NASA-CASE-LAR-10173-1] c27 N71-14090

Chelate-modified polymers for atmospheric gas  
chromatography  
[NASA-CASE-ARC-11154-1] c25 N80-23383

**CHEMICAL ANALYSIS**  
Analytical test apparatus and method for  
determining oxygen content in alkali liquid  
metal  
[NASA-CASE-XLE-01997] c06 N71-23527

Automated fluid chemical analyzer for  
microchemical analysis of small quantities of  
liquids by use of selected reagents and  
analyzer units  
[NASA-CASE-XNP-09451] c06 N71-26754

Method for determining presence and type of OH  
in MgO  
[NASA-CASE-NPO-10774] c06 N72-17095

Micrometeoroid analyzer using arrays of  
interconnected capacitors and ion detector  
[NASA-CASE-ARC-10443-1] c14 N73-20477

Chromato-fluorographic drug detector --- device  
for detecting and recording fluorescent  
properties of materials  
[NASA-CASE-ARC-10633-1] c25 N74-26947

Amino acid analysis  
[NASA-CASE-NPO-12130-1] c25 N75-14844

Gas chromatograph in injection system  
[NASA-CASE-ARC-10344-2] c35 N75-26334

System for monitoring physical characteristics  
of fluids --- acoustic techniques  
[NASA-CASE-NPO-15400-1] c34 N81-24384

**CHEMICAL AUXILIARY POWER UNITS**  
Development and characteristics of ion-exchange  
membrane and electrode assembly for fuel cells  
or electrolysis cells  
[NASA-CASE-XMS-02063] c03 N71-29044

**CHEMICAL BONDS**  
Fluorine-containing polyformals  
[NASA-CASE-XMF-06900-1] c27 N79-21191

Preparation of perfluorinated 1,2,4-oxadiazoles  
--- heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-2] c25 N80-26407

Perfluoroalkyl polytriazines containing pendent  
iododifluoromethyl groups

[NASA-CASE-ARC-11241-1] c25 N81-14016

**CHEMICAL COMPOSITION**  
Phototropic composition of matter with  
sensitivity to ultraviolet light and usable  
for producing positive photographic images  
[NASA-CASE-XGS-03736] c14 N72-22443

Nitramine propellants --- gun propellant burning  
rate  
[NASA-CASE-NFC-14103-1] c28 N78-31255

Composition and method for making polyimide  
resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c27 N81-19296

**CHEMICAL COMPOUNDS**  
Ultraviolet chromatographic detector for  
quantitative and qualitative analysis of  
compounds  
[NASA-CASE-HQN-10756-1] c14 N72-25428

**CHEMICAL ELEMENTS**  
Apparatus for remote handling of materials ---  
mixing or analyzing dangerous chemicals  
[NASA-CASE-LAR-10634-1] c37 N74-18123

**CHEMICAL ENGINEERING**  
Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c25 N79-10162

**CHEMICAL EXPLOSIONS**  
Hypervelocity gun --- using both electric and  
chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c09 N79-21084

**CHEMICAL MACHINING**  
Reusable masking boot for chemical machining  
operations  
[NASA-CASE-XNP-02092] c15 N70-42033

**CHEMICAL PROPERTIES**  
Method for producing alternating ether-siloxane  
copolymers with stable properties when exposed  
to elevated temperatures and UV radiation  
[NASA-CASE-XMF-02584] c06 N71-20905

Chemical and physical properties of synthetic  
polyurethane polymer prepared by reacting  
hydroxy carbonate with organic diisocyanate  
[NASA-CASE-MFS-10512] c06 N73-30099

Chemical and elastic properties of fluorinated  
polyurethanes  
[NASA-CASE-NPO-10767-1] c06 N73-33076

Thiophenyl ether disiloxanes and trisiloxanes  
useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c37 N74-21058

**CHEMICAL REACTIONS**  
Process for interfacial polymerization of  
pyromellitic dianhydride and tetraamino benzene  
[NASA-CASE-XLA-03104] c06 N71-11235

Synthesis of polymeric schiff bases by  
schiff-base exchange reactions  
[NASA-CASE-XMF-08651] c06 N71-11236

Preparation of ordered poly(arylenesiloxane)/  
polymers  
[NASA-CASE-XMF-10753] c06 N71-11237

Synthesis and chemical properties of  
imidazopyrrolone/imide copolymers  
[NASA-CASE-XLA-08802] c06 N71-11238

Composition and process for improving definition  
of resin masks used in chemical etching  
[NASA-CASE-XGS-04993] c14 N71-17574

Preparation of inorganic solid film lubricants  
with long wear life and stability in aerospace  
environments  
[NASA-CASE-XMF-03988] c15 N71-21403

Synthesis of high purity dianilinosilanes  
[NASA-CASE-XMF-06409] c06 N71-23230

Synthesis of aromatic diamines and dialdehyde  
polymers using Schiff base  
[NASA-CASE-XMF-03074] c06 N71-24740

Chemical synthesis of hydroxy terminated  
perfluoro ethers as intermediates for highly  
fluorinated polyurethane resins  
[NASA-CASE-NPO-10768] c06 N71-27254

Chemical synthesis of thermally stable  
organometallic polymers with divalent metal  
ion and tetraphenylphosphonitrilic units  
[NASA-CASE-HQN-10364] c06 N71-27363

Apparatus and process for volumetrically  
dispensing reagent quantities of volatile  
chemicals for small batch reactions  
[NASA-CASE-NPO-10070] c15 N71-27372

Infusible polymer production from reaction of  
polyfunctional epoxy resins with  
polyfunctional aziridine compounds  
[NASA-CASE-NFC-10701] c06 N71-28620

- Process for preparing high molecular weight polyaryloxysilanes from lower molecular weight forms  
[NASA-CASE-XMF-08674] c06 N71-28807
- Organometallic compounds of niobium and tantalum useful for film deposition  
[NASA-CASE-XNP-04023] c06 N71-28808
- Description of method for making homogeneous foamed materials in weightless environment using materials having different physical properties  
[NASA-CASE-XMF-09902] c15 N72-11387
- Method to produce high purity copper fluoride by heating copper hydroxyfluoride powder and subjecting to flowing fluorine gas  
[NASA-CASE-LEW-10794-1] c06 N72-17093
- Pumping and metering dual piston system and monitor for reaction chamber constituents  
[NASA-CASE-GSC-10218-1] c15 N72-21465
- Development of apparatus for producing metal powder particles of controlled size  
[NASA-CASE-XLE-06461-2] c17 N72-28535
- Chemical spot tests for identification of titanium and titanium alloys used in aerospace vehicles  
[NASA-CASE-LAR-10539-1] c17 N73-12547
- Self-cycling fluid heater for heating continuous fluid stream to ultrahigh temperatures to facilitate chemical reactions  
[NASA-CASE-MSC-15567-1] c33 N73-16918
- Chemical process for production of polyisobutylene compounds and application as solid rocket propellant binder  
[NASA-CASE-NPO-10893] c27 N73-22710
- Preparation of stable polyurethane polymer by reacting polymer with diisocyanate  
[NASA-CASE-MFS-10506] c06 N73-30100
- Preparation of polyurethane polymer by reacting hydroxy polyformal with organic diisocyanate  
[NASA-CASE-MFS-10509] c06 N73-30103
- Utilization of lithium p-lithiophenoxide to prepare star polymers  
[NASA-CASE-NPO-10998-1] c06 N73-32029
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c27 N74-12812
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c27 N74-27037
- Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c25 N75-26043
- Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NFO-12061-1] c27 N76-16228
- Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c45 N76-31714
- Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c26 N76-32229
- Preparation of perfluorinated imidoylamidoximes --- for eventual preparation of heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-1] c23 N80-26386
- Preparation of perfluorinated 1,2,4-triazoles --- heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-2] c25 N80-26407
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-1] c27 N80-26447
- An improved synthesis of 2,4,8,10-tetroxaspiro (5.5) undecane  
[NASA-CASE-ARC-11243-2] c23 N80-31472
- Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c27 N81-14678
- CHEMICAL REACTORS**
- Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c25 N79-28253
- Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c37 N80-10494
- Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c31 N80-18231
- Thermal reactor and process --- liquid silicon production from silane  
[NASA-CASE-NPO-14369-1] c25 N80-20338
- Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c25 N82-11144
- CHEMICAL TESTS**
- Chemical spot tests for identification of titanium and titanium alloys used in aerospace vehicles  
[NASA-CASE-LAR-10539-1] c17 N73-12547
- Chemical spot test for identifying magnesium or magnesium alloys used in aerospace applications  
[NASA-CASE-LAR-10953-1] c17 N73-27446
- CHEMILUMINESCENCE**
- Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c51 N80-16714
- CHEMOTHERAPY**
- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N81-14613
- CHIPS (ELECTRONICS)**
- Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c37 N81-33482
- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c37 N82-12441
- CHLORINATION**
- Chlorine generator for purifying water in life support systems of manned spacecraft  
[NASA-CASE-XLA-08913] c14 N71-28933
- Hydrosulfurization of chlorinated coal  
[NASA-CASE-NFO-15304-1] c28 N82-12240
- CHLOROPRENE RESINS**
- Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c27 N74-12814
- CHOKES**
- Current dependent variable inductance for input filter chokes of ac or dc power supplies  
[NASA-CASE-ERC-10139] c09 N72-17154
- CHOKES (RESTRICTIONS)**
- Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c07 N74-31270
- CHOLESTEROL**
- Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c52 N75-15270
- CHROMATOGRAPHY**
- Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ARC-10633-1] c25 N74-26947
- CHROMIUM**
- Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c44 N78-19599
- Improving the efficiency of silicon solar cells containing chromium  
[NASA-CASE-NFC-15179-1] c44 N80-32850
- CHROMIUM ALLOYS**
- Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c26 N75-29236
- NiCrAl ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c26 N81-12211
- CHROMOSOMES**
- Automated clinical system for chromosome analysis  
[NASA-CASE-NFO-13913-1] c52 N79-12694
- CINEMATOGRAPHY**
- High speed photo-optical time recorder for indicating time at exposure of each frame of high speed movie camera film  
[NASA-CASE-KSC-10294] c14 N72-18411
- Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MFS-22517-1] c35 N76-18402
- CIRCUIT BOARDS**
- Electrical feedthrough connection for printed circuit boards  
[NASA-CASE-XMF-01483] c14 N69-27431
- Electric connector for printed cable to printed cable or to printed board  
[NASA-CASE-XMF-00369] c09 N70-36494
- Electrical connection for printed circuits on common board, using bellows principle in rivet  
[NASA-CASE-XNP-05082] c15 N70-41960
- Electrical spot terminal assembly for printed circuit boards  
[NASA-CASE-NPO-10034] c15 N71-17685
- Development and characteristics of polyimide impregnated laminates with fiberglass cloth

- backing for application as printed circuit boards  
 [NASA-CASE-MFS-20408] c18 N73-12604
- Techniques for packaging and mounting printed circuit boards  
 [NASA-CASE-MFS-21919-1] c10 N73-25243
- Tool for use in lifting pin supported objects  
 [NASA-CASE-NPO-13157-1] c37 N74-32918
- Shock absorbing mount for electrical components  
 [NASA-CASE-NPO-13253-1] c37 N75-18573
- Connector --- for connecting circuits on different layers of multilayer printed circuit boards  
 [NASA-CASE-LAR-11709-1] c37 N76-27567
- Traveling wave tube circuit  
 [NASA-CASE-LEW-12013-1] c33 N79-10339
- CIRCUIT BREAKERS**
- Interrupter switching device utilizing electrodes and mercury filled capillary tubes in which current flow vaporizes mercury as circuit breaker  
 [NASA-CASE-XNP-02251] c12 N71-20896
- Single electrical circuit component combining diode, fuse, and blown indicator with elongated tube of heat resistant transparent material  
 [NASA-CASE-XKS-03381] c09 N71-22796
- Electrical circuit selection device for simulating stage separation of flight vehicle  
 [NASA-CASE-XKS-04631] c10 N71-23663
- Electromagnetic braking arrangement for controlling rotor rotation in electric motor  
 [NASA-CASE-XNP-06936] c15 N71-24695
- Relay circuit breaker with magnetic latching to provide conductive and nonconductive paths for current devices  
 [NASA-CASE-MSC-11277] c09 N71-29008
- Multiple circuit protector device  
 [NASA-CASE-XMS-02744] c33 N75-27249
- CIRCUIT DIAGRAMS**
- Excitation and detection circuitry for flux responsive magnetic head  
 [NASA-CASE-XNP-04183] c09 N69-24329
- Impedance transformation device for signal mixing  
 [NASA-CASE-XGS-01110] c07 N69-24334
- Design of transistorized ring counter circuit with special steering and triggering circuits  
 [NASA-CASE-XGS-02095] c09 N69-27463
- Solid state switching circuit design to increase current capacity of low rated relay contacts  
 [NASA-CASE-XNP-09228] c09 N69-27500
- Extra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit  
 [NASA-CASE-XGS-00381] c09 N70-34819
- Frequency shift keyed demodulator - circuit diagrams  
 [NASA-CASE-XGS-02889] c07 N71-11282
- Difference indicating circuit used in conjunction with device measuring gravitational fields  
 [NASA-CASE-XNP-06274] c10 N71-13537
- High voltage transistor circuit  
 [NASA-CASE-XNP-06937] c09 N71-19516
- Control of fusion welding through use of thermocouple wire  
 [NASA-CASE-MFS-06074] c15 N71-20393
- Circuitry for developing autocorrelation function continuously within signal receiving period  
 [NASA-CASE-XNP-00746] c07 N71-21476
- Single electrical circuit component combining diode, fuse, and blown indicator with elongated tube of heat resistant transparent material  
 [NASA-CASE-XKS-03381] c09 N71-22796
- Design and development of buck-boost voltage regulator circuit with additive or subtractive alternating current impressed on variable direct current source voltage  
 [NASA-CASE-GSC-10735-1] c10 N71-26085
- Design of active RC network capable of operating at high Q values with reduced sensitivity to gain amplification and number of passive components  
 [NASA-CASE-ARC-10042-2] c10 N72-11256
- Precision surface cutter for screen circuit negatives and other microcircuits  
 [NASA-CASE-XLA-09843] c15 N72-27485
- Self-regulating proportionally controlled heating apparatus and technique  
 [NASA-CASE-GSC-11752-1] c77 N75-20140
- Symmetrical odd-modulus frequency divider  
 [NASA-CASE-NPO-13426-1] c33 N75-31330
- Trielectrode capacitive pressure transducer  
 [NASA-CASE-ARC-10711-2] c33 N76-21390
- Frequency discriminator and phase detector circuit  
 [NASA-CASE-NPO-11515-1] c33 N77-13315
- CIRCUIT PROTECTION**
- Use of silicon controlled rectifier shorting circuit to protect thermoelectric generator source from thermal destruction  
 [NASA-CASE-XGS-04808] c03 N69-25146
- Spark gap type protective circuit for fast sensing and removal of overvoltage conditions  
 [NASA-CASE-XAC-08981] c09 N69-39897
- Development of in-line fuse device for protection of electric circuits from excessive currents and voltages  
 [NASA-CASE-MSC-12135-1] c09 N71-12526
- Overcurrent protecting circuit for push-pull transistor amplifiers  
 [NASA-CASE-MSC-12033-1] c09 N71-13531
- Solder coating process for printed copper circuit protection  
 [NASA-CASE-XMF-01599] c09 N71-20705
- Power supply with overload protection for series stage transistor  
 [NASA-CASE-XMS-00913] c10 N71-23543
- Selective plating of etched circuits without removing previous plating  
 [NASA-CASE-XGS-03120] c15 N71-24047
- Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
 [NASA-CASE-GSC-10114-1] c10 N71-27366
- Sensing circuit for instantaneous reaction to power overloads  
 [NASA-CASE-GSC-10667-1] c10 N71-33129
- Current protection equipment for saturable core transformers  
 [NASA-CASE-ERC-10075-2] c09 N72-22196
- Development of process for forming insulating layer between two electrical conductor or semiconductor materials  
 [NASA-CASE-LEW-10489-1] c15 N72-25447
- Phase protection system for ac power lines  
 [NASA-CASE-MSC-17832-1] c33 N74-14956
- Overvoltage protection network  
 [NASA-CASE-ARC-10197-1] c33 N74-17929
- Shock absorbing mount for electrical components  
 [NASA-CASE-NPO-13253-1] c37 N75-18573
- Multiple circuit protector device  
 [NASA-CASE-XMS-02744] c33 N75-27249
- Multi-cell battery protection system  
 [NASA-CASE-LEW-12039-1] c44 N78-14625
- Fused switch  
 [NASA-CASE-XMS-01244-1] c33 N79-33393
- Base drive for paralleled inverter systems  
 [NASA-CASE-NPO-14163-1] c33 N81-14220
- Shielded conductor cable system  
 [NASA-CASE-MSC-12745-1] c33 N81-27397
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
 [NASA-CASE-NPC-14316-1] c33 N81-33404
- CIRCUITS**
- Distribution of currents to circuits using electrical adaptor  
 [NASA-CASE-XLA-01288] c09 N69-21470
- Nondestructive interrogating and state changing circuit for binary magnetic storage elements  
 [NASA-CASE-XGS-00174] c08 N70-34743
- Electronic circuit system for controlling electric motor speed  
 [NASA-CASE-XMF-01129] c09 N70-38712
- Starting circuit design for initiating and maintaining arcs in vapor lamps  
 [NASA-CASE-XNP-01058] c09 N71-12540
- Voltage drift compensation circuit for analog-to-digital converter  
 [NASA-CASE-XNP-04780] c08 N71-19687
- High voltage divider system for attenuating high voltages to convenient levels suitable for introduction to measuring circuits  
 [NASA-CASE-XLF-02008] c09 N71-21583
- Negation of magnetic fields produced by thin waferlike circuit elements in space vehicles

[NASA-CASE-XGS-03390] c03 N71-23187  
Circuits for controlling reversible dc motor.  
[NASA-CASE-XNP-07477] c09 N71-26092  
Device for rapid adjustment and maintenance of  
temperature in electronic components  
[NASA-CASE-XNP-02792] c14 N71-28958  
Pulse generating circuit for operation at very  
high duty cycles and repetition rates  
[NASA-CASE-XNP-00745] c10 N71-28960  
Development of electric circuit for production  
of different pulse width signals  
[NASA-CASE-XLA-07788] c09 N71-29139  
Sensing circuit for instantaneous reaction to  
power overloads  
[NASA-CASE-GSC-10667-1] c10 N71-33129  
Pulsed excitation voltage circuit for strain  
gage bridge transducers  
[NASA-CASE-FRC-10036] c09 N72-22200  
Development of thermal to electric power  
conversion system using solid state switches  
of electrical currents to load for Seebeck  
effect compensation  
[NASA-CASE-NPO-11388] c03 N72-23048  
Inductive-capacitive loops as load insensitive  
power converters  
[NASA-CASE-ERC-10268] c09 N72-25252  
Fail-safe multiple transformer circuit  
configuration  
[NASA-CASE-NPO-11078] c09 N72-25262  
Precision surface cutter for screen circuit  
negatives and other microcircuits  
[NASA-CASE-XLA-C5843] c15 N72-27485  
Bridge-type gain control circuit  
[NASA-CASE-GSC-10786-1] c10 N72-28241  
Active tuned circuits for microelectronic  
construction  
[NASA-CASE-GSC-11340-1] c10 N72-33230  
Thermochromic compositions for detecting heat  
levels in electronic circuits and devices  
[NASA-CASE-NPO-10764-1] c14 N73-14428  
Electrodeless lamp circuit driven by induction  
[NASA-CASE-MFS-21214-1] c09 N73-30181  
Circuit for detecting initial systole and  
diastolic notch --- for monitoring arterial  
pressure  
[NASA-CASE-LEW-11581-1] c54 N75-13531  
Peak holding circuit for extremely narrow pulses  
[NASA-CASE-MSC-14129-1] c33 N75-18479  
High voltage distributor  
[NASA-CASE-GSC-11849-1] c33 N76-16332  
Circuit for automatic load sharing in parallel  
converter modules  
[NASA-CASE-NPO-14056-1] c33 N79-24257  
Process for preparing high temperature polyimide  
film laminates  
[NASA-CASE-LAR-12742-1] c24 N81-12174  
Method and apparatus for fabricating improved  
solar cell modules  
[NASA-CASE-NPO-14416-1] c44 N81-14389  
Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c33 N81-24348  
Programmable scan/read circuitry for charge  
coupled device imaging detectors --- for a  
startracker  
[NASA-CASE-NPO-15345-1] c33 N81-27403

**CIRCULAR CONES**  
Optical apparatus for visual detection of  
roundness and regularity of cone surfaces  
[NASA-CASE-XMF-00462] c14 N70-34298

**CIRCULAR CYLINDERS**  
Modulating and controlling intensity of light  
beam from high temperature source by  
servocontrolled rotating cylinders  
[NASA-CASE-XMS-04300] c09 N71-19479

**CIRCULAR POLARIZATION**  
Left and right hand circular electromagnetic  
polarization excitation by phase shifter and  
hybrid networks  
[NASA-CASE-GSC-10021-1] c09 N71-24595  
Planar array circularly polarized antenna with  
wall slot excitation  
[NASA-CASE-NPO-10301] c07 N72-11148  
Circularly polarized antenna with linearly  
polarized pair of elements  
[NASA-CASE-ERC-10214] c09 N72-31235

**CIRCULAR TUBES**  
Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c31 N74-14133

**CIRCULATORS (PHASE SHIFT CIRCUITS)**  
Development of electromagnetic wave transmission  
line circulator and application to parametric  
amplifier circuits  
[NASA-CASE-XNP-02140] c09 N71-23097  
Dielectric-loaded waveguide circulator for  
cryogenically cooled and cascaded maser  
waveguide structures  
[NASA-CASE-NPO-14254-1] c36 N80-18372

**CLAMPING CIRCUITS**  
Clamped amplifier circuit for horizon scanner  
enabling amplification and accurate  
measurement of specified parameters  
[NASA-CASE-XGS-01784] c10 N71-20782

**CLAMPS**  
Portable device for aligning surfaces of two  
adjacent wall or sheet sections for joining at  
point of junction  
[NASA-CASE-XMF-01452] c15 N70-41371  
Hydraulic clamping of sheet stock specimens  
[NASA-CASE-XLA-05100] c15 N71-17696  
Inertial component clamping assembly design for  
spacecraft guidance and control system mounting  
[NASA-CASE-XMS-02184] c15 N71-20813  
Design and development of module joint clamping  
device for application to solar array  
construction  
[NASA-CASE-XNP-02341] c15 N71-21531  
Quick attach mechanism for moving or stationary  
wires, ropes, or cables  
[NASA-CASE-XFR-05421] c15 N71-22994  
Clamp-mount device  
[NASA-CASE-MFS-25510-1] c37 N82-11470

**CLAYS**  
White paint production by heating impure  
aluminum silicate clay having low solar  
absorptance  
[NASA-CASE-XNP-02139] c18 N71-24184

**CLEAN ROOMS**  
Environmentally controlled suit for working in  
sterile chamber  
[NASA-CASE-LAR-10076-1] c05 N73-20137

**CLEANERS**  
Device for back purging thrust engines  
[NASA-CASE-XMS-04826] c28 N71-28849  
Noncontaminating swab with absorbent end covered  
with netted envelope to prevent egress of  
absorbent material  
[NASA-CASE-MFS-18100] c15 N72-11390

**CLEANING**  
Device for removing plastic dust cover from  
digital computer disk packs for inspection and  
cleaning  
[NASA-CASE-LAR-10590-1] c15 N70-26819  
System for sterilizing objects --- cleaning  
space vehicle systems  
[NASA-CASE-KSC-11085-1] c54 N81-24724

**CLEAR AIR TURBULENCE**  
Development of radiometric sensor to warn  
aircraft pilots of region of clear air  
turbulence along flight path  
[NASA-CASE-ERC-10081] c14 N72-28437  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c36 N75-15028  
CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c47 N81-16677

**CLIMBING FLIGHT**  
Aircraft indicator for pilot control of takeoff  
roll, climbout path and verticle flight path  
in poor visibility conditions  
[NASA-CASE-XLA-00487] c14 N70-40157

**CLINICAL MEDICINE**  
Process for preparing calcium phosphate salts  
for tooth repair  
[NASA-CASE-ERC-10338] c04 N72-33072  
Measurement of gas production of microorganisms  
--- using pressure sensors  
[NASA-CASE-LAR-11326-1] c35 N75-33368  
Production of I-123  
[NASA-CASE-LEW-11390-3] c25 N76-29379  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c52 N79-12694  
Medical diagnosis system and method with  
multispectral imaging --- depth of burns and  
optical density of the skin  
[NASA-CASE-NPO-14402-1] c52 N81-27783

**CLIPS**  
Low X-ray absorption aneurism clips  
[NASA-CASE-LAR-12650-1] c52 N81-29768

**CLOCKS**

Time synchronization system for synchronizing clocks at remote locations with master clock using moon reflected coded signals.  
[NASA-CASE-NPO-10143] c10 N71-26326  
Circuit for measuring wide range of pulse rates by utilizing high capacity counter.  
[NASA-CASE-XNP-06234] c10 N71-27137  
Fault tolerant clock apparatus utilizing a controlled minority of clock elements.  
[NASA-CASE-MSC-12531-1] c35 N75-30504  
Clock setter  
[NASA-CASE-LAR-11458-1] c35 N76-16392

**CLOSED CIRCUIT TELEVISION**

Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c18 N76-14186

**CLOSED CYCLES**

Closed loop radio communication ranging system to determine distance between moving airborne vehicle and fixed ground station  
[NASA-CASE-XNP-01501] c21 N70-41930  
Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c33 N75-25040  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-25059-1] c44 N76-27664

**CLOSED ECOLOGICAL SYSTEMS**

Potable water reclamation from human wastes in zero-G environment  
[NASA-CASE-XLA-03213] c05 N71-11207  
Spacecraft with artificial gravity and earthlike atmosphere  
[NASA-CASE-LEW-11101-1] c31 N73-32750  
Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c54 N77-32722  
Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c28 N81-24280

**CLOSURES**

Design and characteristics of device for closing canisters under high vacuum conditions  
[NASA-CASE-XLA-01446] c15 N71-21528  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c54 N78-31736

**CLOUD CHAMBERS**

Heat transfer device  
[NASA-CASE-MFS-22938-1] c34 N76-18374

**CLOUD COVER**

Cloud cover sensor  
[NASA-CASE-NFO-14936-1] c47 N80-26992

**CLOUDS (METEOROLOGY)**

Development and characteristics of apparatus for measuring intensity of electric field in atmosphere  
[NASA-CASE-KSC-10730-1] c14 N73-32318  
Electric field measuring and display system --- for cloud formations  
[NASA-CASE-KSC-10731-1] c33 N74-27862

**CLUTTER**

Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c32 N78-18266

**CMOS**

Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c33 N79-12321

**COAL**

Underground mineral extraction  
[NASA-CASE-NPO-14143-1] c31 N78-24387  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c43 N79-25443  
Thickness measurement system  
[NASA-CASE-MFS-23721-1] c31 N79-28370  
Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c43 N79-31706  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c43 N80-14423  
Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c43 N80-23711  
Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c25 N81-33246  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c28 N82-12241

**COAL GASIFICATION**

Pressure letdown method and device for coal conversion systems

[NASA-CASE-NPO-15100-1] c28 N81-33306

**COAL LIQUEFACTION**

Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c25 N79-11152

**COAL UTILIZATION**

Coal desulfurization process  
[NASA-CASE-MFC-13937-1] c44 N78-31527  
Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c31 N81-15154  
Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c25 N82-11144  
Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NFO-15304-1] c28 N82-12240

**COATING**

Solder coating process for printed copper circuit protection  
[NASA-CASE-XMF-01599] c09 N71-20705  
High thermal emittance black surface coatings and process for applying to metal and metal alloy surfaces used in radiative cooling of spacecraft  
[NASA-CASE-XLA-06199] c15 N71-24875  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c37 N78-13436  
Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c44 N78-19599  
Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c27 N78-31233  
Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c74 N78-32854

**COATINGS**

Bonded solid lubricant coatings of calcium fluoride and binder for high temperature stability  
[NASA-CASE-XMS-00259] c18 N70-36400  
Cathode ray tube with coating of phosphor and cobalt oxides  
[NASA-CASE-ERC-10468] c09 N72-20206  
Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NFO-13867-1] c27 N78-14164  
Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c31 N79-21227

**COAXIAL CABLES**

Design and development of device for cooling inner conductor of coaxial cable  
[NASA-CASE-XNP-09775] c09 N71-20445  
Design and development of electric connectors for rigid and semirigid coaxial cables  
[NASA-CASE-XNP-04732] c09 N71-20851  
Transducer circuit design with single coaxial cable for input and output connections including incorporation into miniaturized catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597  
Collapsible antenna boom and coaxial transmission line having inflatable inner tube  
[NASA-CASE-MFS-20068] c07 N71-27191  
Vibration isolation system, using coaxial helical compression springs  
[NASA-CASE-NFO-11012] c15 N72-11391  
Development and characteristics of hermetically sealed coaxial package for containing microwave semiconductor components  
[NASA-CASE-GSC-10791-1] c15 N73-14469  
System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NFC-13138-1] c33 N74-17927  
Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c33 N75-30430  
High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c33 N80-18285

**COAXIAL PLASMA ACCELERATORS**

Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c75 N76-17951

**COBALT ALLOYS**

High strength, corrosion resistant cobalt-based alloys for aerospace structures  
[NASA-CASE-XLF-00726] c17 N71-15644  
High temperature cobalt-base alloy resistant to corrosion by liquid metals and to sublimation

- in vacuum environment  
[NASA-CASE-XLE-02991] c17 N71-16025
- High temperature ferromagnetic cobalt-base alloy  
for electrical power generating equipment  
[NASA-CASE-XLE-03629] c17 N71-23248
- Cobalt-tungsten alloys with superior strength at  
elevated temperatures  
[NASA-CASE-LEW-10436-1] c17 N73-32415
- COBALT OXIDES**
- Cathode ray tube with coating of phosphor and  
cobalt oxides  
[NASA-CASE-ERC-10468] c09 N72-20206
- COCKPIT SIMULATORS**
- Controlled visibility device for simulating poor  
visibility conditions in training pilots in  
instrument landing and flight procedures  
[NASA-CASE-XFR-04147] c11 N71-10748
- COCKPITS**
- Aircraft canopy lock  
[NASA-CASE-ERC-11065-1] c05 N81-24047
- CODERS**
- Design and development of encoder/decoder system  
to generate binary code which is function of  
outputs of plurality of bistable elements  
[NASA-CASE-NPO-10342] c10 N71-33407
- Biorthogonal encoder with modular design  
[NASA-CASE-NPO-10629] c08 N72-18184
- Method and apparatus for decoding compatible  
convolutional codes  
[NASA-CASE-MS-C-14070-1] c32 N74-32598
- Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c62 N76-31546
- Twin-capacitive shaft angle encoder with analog  
output signal  
[NASA-CASE-ARC-10897-1] c33 N77-31404
- CODING**
- Description of error correcting methods for use  
with digital data computers and apparatus for  
encoding and decoding digital data  
[NASA-CASE-XNP-02748] c08 N71-22749
- Apparatus and digital technique for coding rate  
data  
[NASA-CASE-LAR-10128-1] c08 N73-20217
- Binary concatenated coding system  
[NASA-CASE-MS-C-14082-1] c60 N76-23850
- Differential pulse code modulation  
[NASA-CASE-MS-C-12506-1] c32 N77-12239
- COEFFICIENT OF FRICTION**
- Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c35 N76-31489
- Locking redundant link  
[NASA-CASE-LAR-11900-1] c37 N79-14382
- COENZYMES**
- Bioassay of flavin coenzymes  
[NASA-CASE-GSC-10565-1] c06 N72-25149
- COHERENT ELECTROMAGNETIC RADIATION**
- Design of folded traveling wave maser structure  
[NASA-CASE-XNP-05219] c16 N71-15550
- Development of focused image holography with  
extended sources  
[NASA-CASE-ERC-10019] c16 N71-15551
- Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c36 N81-12407
- COHERENT LIGHT**
- Hybrid holographic system using reference,  
transmitted, and reflected beams simultaneously  
[NASA-CASE-MFS-20074] c16 N71-15565
- Development of apparatus for amplitude  
modulation of diode laser by periodic  
discharge of direct current power supply  
[NASA-CASE-XMS-04269] c16 N71-22895
- Coherent light beam device and method for  
measuring gas density in vacuum chambers  
[NASA-CASE-XER-11203] c14 N71-28994
- COHERENT RADIATION**
- Design and development of multichannel laser  
remote control system using modulated  
helium-neon laser as transmitter and light  
collector as receiving antenna  
[NASA-CASE-LAR-10311-1] c16 N73-16536
- Monitoring atmospheric pollutants with a  
heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c35 N74-11284
- Apparatus for scanning the surface of a  
cylindrical body  
[NASA-CASE-NPO-11861-1] c36 N74-20009
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c28 N74-27425
- Method and apparatus for generating coherent  
radiation in the ultra-violet region and above  
by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c36 N76-29575
- Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c36 N80-24602
- COINCIDENCE CIRCUITS**
- Frequency measurement by coincidence detection  
with standard frequency  
[NASA-CASE-MS-C-14649-1] c33 N76-16331
- COLD CATHODES**
- Cold cathode discharge tube with pressurized gas  
cell for meteoroid detection in space  
[NASA-CASE-LAR-10483-1] c14 N73-32327
- COLD GAS**
- Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c09 N77-10071
- COLD WELDING**
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N81-19455
- COLD WORKING**
- Cold metal hydroforming techniques using epoxy  
molds for counteracting creep or stretch  
[NASA-CASE-XLE-05641-1] c15 N71-26346
- COLLAPSE**
- Collapsible piston for hypervelocity gun  
[NASA-CASE-MS-C-13789-1] c11 N73-32152
- COLLECTION**
- Automatic liquid inventory collecting and  
dispensing unit  
[NASA-CASE-LAR-11071-1] c35 N75-19611
- Urine collection device  
[NASA-CASE-MS-C-16433-1] c52 N78-27750
- Absorbent product and articles made therefrom  
--- for collection of human wastes  
[NASA-CASE-MS-C-18223-1] c24 N81-16127
- COLLIMATION**
- Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c36 N74-21091
- Optical alignment device  
[NASA-CASE-ARC-10932-1] c74 N76-22993
- Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c36 N77-32478
- Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c35 N80-28686
- Collimated beam manifold and method for using  
the same --- laser beams  
[NASA-CASE-MFS-25312-1] c74 N80-34251
- Dual laser optical system and method for  
studying fluid flow  
[NASA-CASE-MFS-25315-1] c36 N81-19440
- COLLIMATORS**
- X ray collimating structure for focusing  
radiation directly onto detector  
[NASA-CASE-XBQ-04106] c14 N70-40240
- Collimator for analyzing spatial location of  
near and distant sources of radiation  
[NASA-CASE-MFS-20546-2] c14 N73-30389
- Multiplate focusing collimator --- for scanning  
small near radiation sources  
[NASA-CASE-MFS-20932-1] c35 N75-19616
- Multiplate collimator  
[NASA-CASE-GSC-12608-1] c35 N81-12387
- COLLISION AVOIDANCE**
- Cooperative Doppler radar system for avoiding  
midair collisions  
[NASA-CASE-LAR-10403] c21 N71-11766
- Satellite aided aircraft collision avoidance  
system effective for large number of aircraft  
[NASA-CASE-ERC-10090] c21 N71-24948
- Vertically stacked collinear array of  
independently fed omnidirectional antennas for  
use in collision warning systems on commercial  
aircraft  
[NASA-CASE-LAR-10545-1] c09 N72-21244
- Development and operating principles of  
collision warning system for aircraft accident  
prevention  
[NASA-CASE-HCN-10703] c21 N73-13643
- Development and characteristics of electronic  
signalling system and data processing  
equipment for warning systems to avoid midair  
collisions between aircraft  
[NASA-CASE-LAR-10717-1] c21 N73-30641
- Satellite aided vehicle avoidance system  
[NASA-CASE-ERC-10419-1] c03 N75-30132
- COLLOIDAL GENERATORS**
- Colloidal particle generator for electrostatic  
engine for propelling space vehicles



- [NASA-CASE-XLE-00817] c28 N70-33265
- COLLOIDAL PROPELLANTS**
- Colloidal particle generator for electrostatic engine for propelling space vehicles [NASA-CASE-XLE-00817] c28 N70-33265
- Low density and low viscosity magnetic propellant for use under zero gravity conditions [NASA-CASE-XLE-01512] c12 N70-40124
- Electrostatic microthrust propulsion system with annular slit colloid thruster [NASA-CASE-GSC-10709-1] c28 N71-25213
- COLLOIDS**
- The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols [NASA-CASE-GSC-12088-1] c74 N78-13874
- COLOR**
- Chemical spot test for identifying magnesium or magnesium alloys used in aerospace applications [NASA-CASE-LAR-10953-1] c17 N73-27446
- Spectrally balanced chromatic lighting approach lighting system [NASA-CASE-ARC-10990-1] c04 N82-16059
- COLOR PHOTOGRAPHY**
- Color photointerpretation of interference colors reflected from thin film oil-coated components in moving gases for gas flow visualization [NASA-CASE-XMF-01779] c12 N71-20815
- Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere [NASA-CASE-MFS-23250-1] c35 N82-11432
- COLOR TELEVISION**
- Color television system utilizing single gun current sensitive color cathode ray tube [NASA-CASE-ERC-10098] c09 N71-28618
- Color television system for allowing monochrome television camera to produce color pictures [NASA-CASE-MSC-12146-1] c07 N72-17109
- Video tape recorder with scan conversion playback for color television signals [NASA-CASE-NPO-10166-1] c07 N73-22076
- Scan converting video tape recorder [NASA-CASE-NPO-10166-2] c35 N76-16391
- System for producing chroma signals [NASA-CASE-MSC-14683-1] c74 N77-18893
- Full color hybrid display for aircraft simulators --- landing aids [NASA-CASE-ARC-10903-1] c09 N78-18083
- COLOR VISION**
- Color perception tester for testing color code perceptiveness of individuals [NASA-CASE-KSC-10278] c05 N72-16015
- COLUMNS**
- Lightweight structural columns --- space erectable trusses [NASA-CASE-LAR-12095-1] c31 N81-25258
- COLUMNS (PROCESS ENGINEERING)**
- Micropacked column for rapid chromatographic analysis using low gas flow rates [NASA-CASE-XNP-04816] c06 N69-39936
- COLUMNS (SUPPORTS)**
- Beam connector apparatus and assembly [NASA-CASE-MFS-25134-1] c31 N81-12283
- Telescoping columns --- parabolic antenna support [NASA-CASE-LAR-12195-1] c31 N81-27324
- COMBINATORIAL ANALYSIS**
- Apparatus for computing square roots [NASA-CASE-XGS-04768] c08 N71-19437
- Combinational logic for generating gate drive signals for phase control rectifiers [NASA-CASE-MFS-25208-1] c33 N81-27402
- COMBUSTION**
- Device for detection of combustion light preceding gaseous explosions [NASA-CASE-LAR-10739-1] c14 N73-16484
- COMBUSTION CHAMBERS**
- Rocket chamber leak test fixture using tubular plug [NASA-CASE-XFR-09479] c14 N69-27503
- Propellant injectors for rocket combustion chambers [NASA-CASE-XLE-00103] c28 N70-33241
- Metal ribbon wrapped outer wall for regeneratively cooled combustion chamber [NASA-CASE-XLE-00164] c15 N70-36411
- Apparatus for cooling and injecting hypergolic propellants into combustion chamber of small rocket engine [NASA-CASE-XLE-00303] c15 N70-36535
- Ignition system for monopropellant combustion devices [NASA-CASE-XNP-00249] c28 N70-38249
- Fabrication method for lightweight regeneratively cooled combustion chamber of channel construction [NASA-CASE-XLE-00150] c28 N70-41818
- Rocket combustion chamber stability by controlling transverse instability during propellant combustion [NASA-CASE-XLE-04603] c33 N71-21507
- Regenerative cooling system for rocket combustion chamber using coolant tubes in convergent-divergent nozzle [NASA-CASE-XLE-04857] c28 N71-23968
- Rocket engine injector orifice to accommodate changes in density, velocity, and pressure, thereby maintaining constant mass flow rate of propellant into rocket combustion chamber [NASA-CASE-XLE-03157] c28 N71-24736
- Coaxial injector for mixing liquid propellants within combustion chambers [NASA-CASE-NFO-11095] c15 N72-25455
- Swirl can, full-annulus combustion chambers for high performance gas turbine engines [NASA-CASE-LEW-11326-1] c23 N73-30665
- Method of electroforming a rocket chamber [NASA-CASE-LEW-11118-1] c20 N74-32919
- Controlled separation combustor --- airflow distribution in gas turbine engines [NASA-CASE-LEW-11593-1] c20 N76-14190
- Fuel combustor [NASA-CASE-LEW-12137-1] c25 N78-10224
- Direct heating surface combustor [NASA-CASE-LEW-11877-1] c34 N78-27357
- Combustor --- low nitrogen oxide formation [NASA-CASE-NFO-13958-1] c25 N79-11151
- Heat exchanger --- rocket combustion chambers and cooling systems [NASA-CASE-LEW-12252-1] c34 N79-13288
- General purpose rocket furnace [NASA-CASE-MFS-23460-1] c12 N79-26075
- Reduction of nitric oxide emissions from a combustor [NASA-CASE-ARC-10814-2] c07 N80-26298
- Diesel engine catalytic combustor system --- turbocharging [NASA-CASE-LEW-12995-1] c37 N80-26659
- Heat pipes to reduce engine exhaust emissions [NASA-CASE-LEW-12590-1] c25 N81-19245
- Fluidized bed coal combustion reactor [NASA-CASE-NFO-14273-1] c25 N82-11144
- COMBUSTION CONTROL**
- Pressurized gas injection for burning rate control of solid propellants [NASA-CASE-XLE-03494] c27 N71-21819
- COMBUSTION EFFICIENCY**
- Fuel injection system for maximum combustion efficiency of rocket engines [NASA-CASE-XLE-00111] c28 N70-38199
- COMBUSTION PHYSICS**
- Characteristics of solid propellant rocket engine with controlled rate of thrust buildup operating in vacuum environment [NASA-CASE-NPO-11559] c28 N73-24784
- Plasma igniter for internal combustion engine [NASA-CASE-NPO-13828-1] c37 N79-11405
- COMBUSTION PRODUCTS**
- Contamination free separation nut eliminating combustion products from ambient surroundings generated by squib firing [NASA-CASE-XGS-01971] c15 N71-15922
- Device for generating and controlling combustion products for testing of fire detection system [NASA-CASE-GSC-11095-1] c14 N72-10375
- System for minimizing internal combustion engine pollution emission [NASA-CASE-NPO-13402-1] c37 N76-18457
- Coal desulfurization process [NASA-CASE-NPO-13937-1] c44 N78-31527
- Combustor --- low nitrogen oxide formation [NASA-CASE-NPO-13958-1] c25 N79-11151
- COMBUSTION STABILITY**
- Rocket combustion chamber stability by controlling transverse instability during propellant combustion [NASA-CASE-XLE-04603] c33 N71-21507
- COMFORT**
- Ride quality meter

- [NASA-CASE-LAR-12882-1] c54 N81-31848  
**COMMAND AND CONTROL**  
 Multiple rate digital command detection system with range clean-up capability  
 [NASA-CASE-NPO-13753-1] c32 N77-20289  
 Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
 [NASA-CASE-KSC-11048-1] c62 N81-24779  
**COMMAND MODULES**  
 Energy absorbing crew couch strut for Apollo command module  
 [NASA-CASE-MSC-12279] c15 N72-17450  
**COMMUNICATING**  
 Communication between computers using two identical communications links  
 [NASA-CASE-NPO-11161] c08 N72-25207  
**COMMUNICATION**  
 Circuitry for developing autocorrelation function continuously within signal receiving period  
 [NASA-CASE-XNP-00746] c07 N71-21476  
 Superconductive resonant cavity for improved signal to noise ratio in communication signal  
 [NASA-CASE-MSC-12259-2] c07 N72-33146  
**COMMUNICATION CABLES**  
 Method of making molded electric connector for use with flat conductor cables  
 [NASA-CASE-XNP-03498] c15 N71-15986  
 Process for making RF shielded cable connector assemblies and resulting structures  
 [NASA-CASE-GSC-11215-1] c09 N73-28083  
 Fiber distributed feedback laser  
 [NASA-CASE-NPO-13531-1] c36 N76-24553  
 High-speed data link for moderate distances and noisy environments  
 [NASA-CASE-NPO-14152-1] c32 N80-18252  
**COMMUNICATION EQUIPMENT**  
 Multiplexed communication system design including automatic correction of transmission errors introduced by frequency spectrum shifts  
 [NASA-CASE-XNP-01306] c07 N71-20814  
 Binary data decoding device for use at receiving end of communication channel  
 [NASA-CASE-NPO-10113] c07 N71-24741  
 Characteristics of data-aided carrier tracking loop used for tracking carrier in angle modulated communications system  
 [NASA-CASE-NPO-11282] c10 N73-16205  
 Doppler compensated communication system for locating supersonic transport position  
 [NASA-CASE-GSC-10087-4] c07 N73-20174  
 Differential phase shift keyed communication system  
 [NASA-CASE-MSC-14065-1] c32 N74-26654  
**COMMUNICATION SATELLITES**  
 Erectable, inflatable, radio signal reflecting passive communication satellite  
 [NASA-CASE-XLA-00210] c30 N70-40309  
 Development of antenna system for spin stabilized communication satellite for simultaneous reception and transmission of data  
 [NASA-CASE-XGS-02607] c31 N71-23009  
 Elimination of tracking occultation problems occurring during continuous monitoring of interplanetary missions by using Earth orbiting communications satellite  
 [NASA-CASE-XAC-06029-1] c31 N71-24813  
 Satellite radio communication system with remote steerable antenna  
 [NASA-CASE-XNP-02389] c07 N71-28900  
 Satellite aided vehicle avoidance system  
 [NASA-CASE-ERC-10419-1] c03 N75-30132  
 Ultra stable frequency distribution system  
 [NASA-CASE-NPO-13836-1] c32 N78-15323  
**COMMUTATION**  
 High speed low level voltage commutating switch  
 [NASA-CASE-XAC-00060] c09 N70-39915  
 Elimination of current spikes in buck power converters  
 [NASA-CASE-NFO-14505-1] c33 N81-19393  
**COMMUTATORS**  
 Rocket-borne aspect sensor consisting of radiation sensor, apertured disk, commutator, and counting circuits  
 [NASA-CASE-XGS-06266] c14 N69-27432  
 Commutator for steering precisely controlled bidirectional currents through numerous loads by use of magnetic core shift registers  
 [NASA-CASE-NFO-10743] c08 N72-21199  
**COMPARATOR CIRCUITS**  
 Describing frequency discriminator using digital logic circuits and supplying single binary output signal  
 [NASA-CASE-MFS-14322] c08 N71-18692  
 Development of pulsed differential comparator circuit  
 [NASA-CASE-XLF-03804] c10 N71-19471  
 Multi-cell battery protection system  
 [NASA-CASE-LEW-12039-1] c44 N78-14625  
 Window comparator  
 [NASA-CASE-FRC-10090-1] c33 N78-18308  
**COMPARATORS**  
 Photometric flow meter with comparator reference means  
 [NASA-CASE-XGS-01331] c14 N71-22996  
 Characteristics of comparator circuits for comparison of binary numbers in information processing system  
 [NASA-CASE-XNP-04819] c08 N71-23295  
 High stability buffered phase comparator  
 [NASA-CASE-GSC-12645-1] c33 N81-31482  
**COMPENSATORS**  
 Star image motion compensator using telescope for maintaining fixed images  
 [NASA-CASE-LAR-10523-1] c14 N72-22444  
 Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
 [NASA-CASE-GSC-12168-1] c31 N79-17029  
 Apparatus for and method of compensating dynamic unbalance  
 [NASA-CASE-GSC-12550-1] c37 N81-22358  
**COMPLEX COMPOUNDS**  
 Synthesis of polyformals  
 [NASA-CASE-ARC-11244-1] c23 N82-16174  
**COMPONENT RELIABILITY**  
 Reconfiguring redundancy management  
 [NASA-CASE-MSC-18498-1] c60 N80-30050  
**COMPOSITE MATERIALS**  
 High strength reinforced metallic composites for applications over wide temperature range  
 [NASA-CASE-XLE-02428] c17 N70-33288  
 Method for producing fiber reinforced metallic composites with high strength and elasticity over wide temperature range  
 [NASA-CASE-XLE-00231] c17 N70-38198  
 Composites reinforced with short metal fibers or whiskers and having high tensile strength  
 [NASA-CASE-XLE-00228] c17 N70-38490  
 Unfired-ceramic, highly reflective composite insulation for large launch vehicles  
 [NASA-CASE-XMF-01030] c18 N70-41583  
 Freeze casting of metal ceramic and refractory compound powders into plastic slips  
 [NASA-CASE-XLE-00106] c15 N71-16076  
 Preparation and characteristics of lightweight refractory insulation  
 [NASA-CASE-XMF-05279] c18 N71-16124  
 Flexible composite membrane structure impervious to extremely reactive chemicals in rocket propellants  
 [NASA-CASE-XNP-08837] c18 N71-16210  
 Cryostat for flexure fatigue testing of composite materials  
 [NASA-CASE-XMF-02964] c14 N71-17659  
 Description of method for producing metallic composites reinforced with ceramic and refractory hard metals that are fibered in place  
 [NASA-CASE-XLE-03925] c18 N71-22894  
 Electrically coupled individually encapsulated solar cell matrix  
 [NASA-CASE-NFO-11190] c03 N71-34044  
 Heat treatment and tooling for forming shapes from thermosetting honeycomb core sheets  
 [NASA-CASE-NPO-11036] c15 N72-24522  
 Method for making fiber composites with high strength at high temperatures  
 [NASA-CASE-LEW-10424-2-2] c18 N72-25539  
 Development of thermal compensating structure which maintains uniform length with changes in temperature  
 [NASA-CASE-MFS-20433] c15 N72-28496  
 Bearing material --- composite material with low friction surface for rolling or sliding contact  
 [NASA-CASE-LEW-11930-1] c24 N76-22309  
 Fluid seal for rotating shafts  
 [NASA-CASE-LEW-11676-1] c37 N76-22541

- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c27 N76-24405
- Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c24 N77-27187
- Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c24 N77-27188
- Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c24 N78-15180
- High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c27 N78-19302
- Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c28 N78-24365
- Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c24 N79-17916
- Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c37 N79-18318
- Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c27 N80-16158
- Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c24 N80-26388
- Method of making bearing material  
[NASA-CASE-LEW-11930-3] c24 N80-33482
- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c27 N81-29229
- Resin composition, process for producing the same, product produced therefrom and process for producing said product  
[NASA-CASE-ARC-11331-1] c27 N81-31363
- COMPOSITE PROPELLANTS**  
Ammonium perchlorate composite propellant with organic Cu/II/ chelate catalytic additive  
[NASA-CASE-LAR-10173-1] c27 N71-14090
- Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c28 N80-28536
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c28 N81-15119
- COMPOSITE STRUCTURES**  
Inflatable honeycomb panel element for lightweight structures usable in space stations and other construction  
[NASA-CASE-XLA-00204] c32 N70-36536
- Shrouded composite propulsion system configuration  
[NASA-CASE-XLA-01043] c28 N71-10780
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c24 N75-30260
- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c24 N77-19170
- Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c24 N78-10214
- Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c24 N78-17149
- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c24 N78-27184
- Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c44 N80-16452
- Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c31 N81-25258
- COMPOSITION (PROPERTY)**  
Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c35 N76-16393
- COMPRESSED AIR**  
Actuator using compressed gas as driving force to control valve handling large liquid flows  
[NASA-CASE-XHQ-01208] c15 N70-35409
- COMPRESSIBILITY**  
Nozzle extraction process and handlemeter for measuring handle  
[NASA-CASE-LAR-12147-1] c31 N79-11246
- COMPRESSIBLE FLUIDS**  
Capacitor for measuring density of compressible fluid in liquid, gas, or liquid and gas phases  
[NASA-CASE-XLE-00143] c14 N70-36618
- Apparatus for tensile strength testing of specimen by pressurized fluid  
[NASA-CASE-XKS-06250] c14 N71-15600
- COMPRESSING**  
Method and apparatus for producing very low temperature refrigeration based on gas pressure balance  
[NASA-CASE-XNP-08877] c15 N71-23025
- Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c31 N74-18124
- Mechanical bonding of metal  
[NASA-CASE-LEW-12941-1] c31 N81-16329
- COMPRESSION LOADS**  
Pressure transducer for systems for measuring forces of compression  
[NASA-CASE-NPO-10832] c14 N72-21405
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c44 N74-33379
- Locking redundant link  
[NASA-CASE-LAR-11900-1] c37 N79-14382
- Fixture for environmental exposure of structural materials under compression  
[NASA-CASE-LAR-12602-1] c35 N81-19429
- COMPRESSION RATIO**  
Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c37 N81-29442
- COMPRESSION TESTS**  
Test equipment to prevent buckling of small diameter specimens during compression tests  
[NASA-CASE-LAR-10440-1] c14 N73-32323
- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c09 N74-19528
- Compression test fixture  
[NASA-CASE-MSC-18723-1] c39 N81-24470
- COMPRESSOR BLADES**  
Process for welding compressor and turbine blades to rotors and discs of jet engines  
[NASA-CASE-LEW-10533-1] c15 N73-28515
- COMPRESSORS**  
Thermal pump-compressor for converting solar energy  
[NASA-CASE-XLA-00377] c33 N71-17610
- Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c75 N76-17951
- Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c35 N78-10428
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c37 N80-26658
- A cycling Joule Thomson refrigerator  
[NASA-CASE-NFO-15251-1] c31 N81-19344
- COMPUTATION**  
Apparatus for computing square roots  
[NASA-CASE-XGS-04768] c08 N71-19437
- Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c04 N78-17031
- COMPUTER COMPONENTS**  
Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits  
[NASA-CASE-XNP-01753] c08 N71-22897
- Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c60 N78-17691
- Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-1] c60 N80-21987
- Control means for a solid state crossbar switch  
[NASA-CASE-NFO-15066-1] c33 N80-33679
- COMPUTER DESIGN**  
Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c60 N77-14751
- COMPUTER GRAPHICS**  
System for digitizing graphic displays  
[NASA-CASE-NPO-10745] c08 N72-22164
- COMPUTER NETWORKS**  
High-speed data link for moderate distances and noisy environments  
[NASA-CASE-NFO-14152-1] c32 N80-18252

Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
[NASA-CASE-KSC-11048-1] c62 N81-24779

**COMPUTER PROGRAMMING**

Encoders designed to generate comma free biorthogonal Reed-Muller type code comprising conversion of 64 6-bit words into 64 32-bit data for communication purposes  
[NASA-CASE-NPO-10595] c10 N71-25917

Priority interrupt system --- comprised of four registers  
[NASA-CASE-NFO-13067-1] c60 N76-16800

**COMPUTER PROGRAMS**

Self testing and repairing computer comprising control and diagnostic unit and rollback points for error correction  
[NASA-CASE-NFO-10567] c08 N71-24633

Development of computer program for estimating reliability of self-repair and fault-tolerant systems with respect to selected system and mission parameters  
[NASA-CASE-NFO-13086-1] c15 N73-12495

Development of flight simulator system to show position of joystick displacement  
[NASA-CASE-NPO-11497] c08 N73-25206

**COMPUTER STORAGE DEVICES**

Magnetic matrix memory system for nondestructive reading of information contained in matrix  
[NASA-CASE-XMP-05835] c08 N71-12504

Binary sequence detector with few memory elements and minimized logic circuit complexity  
[NASA-CASE-XNP-05415] c08 N71-12505

Pulsed magnetic core memory element with blocking oscillator feedback for interrogation without loss of digital information  
[NASA-CASE-XGS-03303] c08 N71-18595

Reliable magnetic core circuit apparatus with application in selection matrices for digital memories  
[NASA-CASE-XNP-01318] c10 N71-23033

Time division multiplexed telemetry transmitting system controlled by programmed memory  
[NASA-CASE-GSC-10131-1] c07 N71-24624

Serial digital decoder design with square circuit matrix and serial memory storage units  
[NASA-CASE-NPO-10150] c08 N71-24650

Digital memory system with multiple switch cores for driving each word location  
[NASA-CASE-XNP-01466] c10 N71-26434

Redundant memory for enhanced reliability of digital data processing system  
[NASA-CASE-GSC-10564] c10 N71-29135

Memory device employing semiconductor and ferroelectric properties of single crystal barium titanate  
[NASA-CASE-ERC-10307] c08 N72-21198

Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c60 N76-21914

Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NFO-15295-1] c60 N82-11785

**COMPUTER SYSTEMS DESIGN**

Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c62 N74-14920

Computer interface system  
[NASA-CASE-NPO-13428-1] c60 N77-12721

**COMPUTER TECHNIQUES**

Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c25 N76-18245

Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c09 N77-27131

Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c37 N79-10421

Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c34 N81-26402

**COMPUTERIZED SIMULATION**

Integrated time shared instrumentation display for aerospace vehicle simulators  
[NASA-CASE-XLA-01952] c08 N71-12507

Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411

Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c74 N79-13855

**COMPUTERS**

Telemetry data unit to form multibit words for use between demodulator and computer  
[NASA-CASE-XNP-09225] c09 N69-24333

Data compression processor for monitoring analog signals by sampling procedure  
[NASA-CASE-NPO-10068] c08 N71-19288

Communication between computers using two identical communications links  
[NASA-CASE-NFC-11161] c08 N72-25207

**CONCAVITY**

Concave grating spectrometer for use in near and vacuum ultraviolet regions  
[NASA-CASE-XGS-01036] c14 N70-40003

**CONCENTRATORS**

Concentrator device for controlling direction of solar energy onto energy converters  
[NASA-CASE-XLF-01716] c09 N70-40234

Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NFO-13497-1] c44 N76-14602

Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c44 N77-32583

Non-tracking solar energy collector system  
[NASA-CASE-NFC-13817-1] c44 N79-11471

Solar cell module  
[NASA-CASE-NPO-14467-1] c44 N79-31753

Solar concentrator  
[NASA-CASE-MFS-23727-1] c44 N80-14473

Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c44 N81-17518

**CONCENTRIC SPHERES**

Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NFO-14596-1] c31 N81-33319

**CONDENSATES**

Apparatus for determining volatile condensable material present in polymeric products  
[NASA-CASE-XNP-09699] c06 N71-24607

Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c77 N75-20139

**CONDENSERS (LIQUIFIERS)**

Condenser-separator for dehumidifying air utilizing sintered metal surface  
[NASA-CASE-XLA-08645] c15 N69-21465

Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c77 N75-20139

**CONDENSING**

Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c27 N79-22300

**CONDUCTING FLUIDS**

Multiducted electromagnetic pump for conductive liquids  
[NASA-CASE-NPC-10755] c15 N71-27084

Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c37 N75-19686

**CONDUCTIVE HEAT TRANSFER**

Measuring conductive heat flow and thermal conductivity of laminar gas stream in cylindrical plug to simulate atmospheric reentry  
[NASA-CASE-XLF-00266] c14 N70-34156

Space suit body heat exchanger design composed of thermal conductance yarn and liquid coolant loops  
[NASA-CASE-XMS-09571] c05 N71-19439

Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPC-13147-1] c36 N77-25502

Automatic thermal switch  
[NASA-CASE-GSC-12553-1] c33 N80-21671

**CONDUCTORS**

Support for flexible conductor cable between drawers or racks holding electronic equipment and cabinet assembly housing drawers or racks  
[NASA-CASE-XMF-07587] c15 N71-18701

Method for making conductors for ferrite memory arrays --- from pre-formed metal conductors  
[NASA-CASE-LAR-10994-1] c24 N75-13032

**CONES**

Black body radiometer design with temperature sensing and cavity heat source cone winding  
[NASA-CASE-XNP-09701] c14 N71-26475

**CONFINEMENT**

Observation window for internal gas confining

- chamber  
[NASA-CASE-NPO-1C890] c11 N73-12265
- CONICAL BODIES**  
Conical valve plug for use with reactive cryogenic fluids  
[NASA-CASE-XLE-00715] c15 N70-34859  
Conical reflector antenna with feed approximating line source  
[NASA-CASE-NPO-10303] c07 N72-22127  
Characteristics of microwave antenna with conical reflectors to generate plane wave front  
[NASA-CASE-NPO-11661] c07 N73-14130
- CONICAL SCANNING**  
Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c32 N79-13214
- CONICAL SHELLS**  
Capacitance measuring device for determining flare accuracy on tapered tubes  
[NASA-CASE-XKS-03495] c14 N69-39785  
Foldable, double cone and parabolic reflector system for solar ray concentration  
[NASA-CASE-XLA-04622] c03 N70-41580  
Rotary spindle lathe attachments for machining geometrical cones  
[NASA-CASE-XMS-04292] c15 N71-22722
- CONJUGATES**  
Phase conjugation method and apparatus for an active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c32 N79-24210
- CONNECTORS**  
Expanding and contracting connector strip for solar cell array of Nimbus satellite  
[NASA-CASE-XGS-01395] c03 N69-21539  
Design and development of quick release connector  
[NASA-CASE-XLA-01141] c15 N71-13789  
Development and characteristics of strainer for flared tube fitting  
[NASA-CASE-XLA-05056] c15 N72-11389  
Process for making RF shielded cable connector assemblies and resulting structures  
[NASA-CASE-GSC-11215-1] c09 N73-28083  
Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c31 N79-21225
- CONSCIOUSNESS**  
Development of apparatus and method for quantitatively measuring brain activity as automatic indication of sleep state and level of consciousness  
[NASA-CASE-MS-13282-1] c05 N71-24729
- CONSISTENCY**  
Improved constant-output atomizer  
[NASA-CASE-MFS-25631-1] c34 N82-10360
- CONSOLES**  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c32 N79-23310
- CONSTANTS**  
Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c35 N77-18417
- CONSTRAINTS**  
Three stage motion restraining mechanism for restraining and damping three dimensional vibrational movement of gimballed package during launch of spacecraft  
[NASA-CASE-GSC-10306-1] c15 N71-24694  
Cable guide and restraint device for reefing tubes in uniform manner  
[NASA-CASE-LAR-1C129-1] c15 N73-25512  
Development of restraint system for securing personnel to ergometer while exercising under weightless conditions  
[NASA-CASE-MFS-21046-1] c14 N73-27377  
Reefing system  
[NASA-CASE-LAR-10129-2] c37 N74-20063  
Restraining mechanism  
[NASA-CASE-MS-13054] c54 N78-17677  
Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c52 N81-25662
- CONSTRUCTION**  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c31 N81-12283
- CONSTRUCTION MATERIALS**  
Apparatus and method of assembling building blocks by folding pre-cut flat sheets of material during on-site construction  
[NASA-CASE-MS-12233-1] c15 N72-25454
- Development of construction block in form of container folded from flat sheet and filled with solid material for architectural purposes  
[NASA-CASE-MSC-12233-2] c32 N73-13921
- CONTACT POTENTIALS**  
Lightweight, rugged, inexpensive satellite battery for producing electrical power from ionosphere using electrodes with different contact potentials  
[NASA-CASE-XGS-01593] c03 N70-35408
- CONTAINERLESS BELTS**  
Method of crystallization --- in gravity-free environments  
[NASA-CASE-MFS-23001-1] c76 N77-32919  
Containerless melting and rapid solidification apparatus and method  
[NASA-CASE-MFS-25305-1] c35 N81-16427  
Method and apparatus for supercooling and solidifying substances --- containerless melts and space processing  
[NASA-CASE-MFS-25242-1] c35 N81-24413  
Gas levitator and method for containerless processing  
[NASA-CASE-MFS-25509-1] c34 N82-10359
- CONTAINERS**  
Manufacture of fluid containers from fused coated polyester sheets having resealable septum  
[NASA-CASE-NPO-10123] c15 N71-24835  
Method for locating leaks in hermetically sealed containers  
[NASA-CASE-ERC-10045] c15 N71-24910  
Quantitative liquid measurements in container by resonant frequencies  
[NASA-CASE-XNP-02500] c18 N71-27397
- CONTAMINANTS**  
Fluid transferring system design for purging toxic, corrosive, or noxious fluids and fumes from materials handling equipment for cleansing and accident prevention  
[NASA-CASE-XMS-01905] c12 N71-21089
- CONTAMINATION**  
Emission spectroscopy method for contamination monitoring of inert gas metal arc welding  
[NASA-CASE-XMF-02039] c15 N71-15871  
Contamination free separation and eliminating combustion products from ambient surroundings generated by squib firing  
[NASA-CASE-XGS-01971] c15 N71-15922  
Apparatus and process for volumetrically dispensing reagent quantities of volatile chemicals for small batch reactions  
[NASA-CASE-NPO-10070] c15 N71-27372  
Portable tester for monitoring bacterial contamination by adenine triphosphate light reaction  
[NASA-CASE-GSC-10879-1] c14 N72-25413  
Biocontamination and particulate detection system  
[NASA-CASE-NPO-13953-1] c35 N79-28527
- CONTINUOUS RADIATION**  
CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c39 N78-15512  
Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c35 N79-10390  
Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c04 N81-22036
- CONTINUOUS WAVE LASERS**  
High power laser apparatus and system  
[NASA-CASE-XLE-2529-2] c36 N75-27364  
Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c36 N77-19416  
Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c36 N80-24602  
Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c25 N81-25159
- CONTINUOUS WAVE RADAR**  
Phase locked loop with sideband rejecting properties in continuous wave tracking radar  
[NASA-CASE-XNP-02723] c07 N70-41680  
PM/CW radar system  
[NASA-CASE-MFS-22234-1] c32 N79-10264
- CONTOURS**  
Describing device for surveying contour of surface using X-Y plotter and traveling transducer  
[NASA-CASE-XLA-08646] c14 N71-17586

## CONTROL

## SUBJECT INDEX

- Processing system for semiperiodic electrical signals to produce real time contoured display  
[NASA-CASE-MSC-13407-1] c10 N72-20225
- Variable contour securing system  
[NASA-CASE-MSC-16270-1] c37 N78-27423
- Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c74 N78-27904
- Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c52 N79-10724
- Contour measurement system  
[NASA-CASE-MFS-23726-1] c43 N79-26439
- Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c24 N80-26388
- CONTROL**
- Valve assembly for controlling simultaneously more than one fluid flow, and having stable qualities under loads  
[NASA-CASE-XMS-05890] c09 N71-23191
- Control system for pressure balance device used in calibrating pressure gages  
[NASA-CASE-XMF-04134] c14 N71-23755
- Failure detection and control means for improved drift performance of a gimballed platform system  
[NASA-CASE-MFS-23551-1] c04 N76-26175
- Control means for a solid state crossbar switch  
[NASA-CASE-NFO-15066-1] c33 N80-33679
- Power factor control system for ac induction motors  
[NASA-CASE-MFS-23968-1] c33 N81-27395
- CONTROL BOARDS**
- Ionization control system design for monitoring separately located ion gage pressures on vacuum chambers  
[NASA-CASE-XLE-00787] c14 N71-21090
- CONTROL DATA (COMPUTERS)**
- Computer interface system  
[NASA-CASE-NPO-13428-1] c60 N77-12721
- CONTROL EQUIPMENT**
- Stepping motor control apparatus exciting windings in proper time sequence to cause motor to rotate in either direction  
[NASA-CASE-GSC-10366-1] c10 N71-18772
- Voltage drift compensation circuit for analog-to-digital converter  
[NASA-CASE-XNP-04780] c08 N71-19687
- Development of attitude control system for vertical takeoff aircraft using reaction nozzles displaced from various axes of aircraft  
[NASA-CASE-XAC-08972] c02 N71-20570
- Device for controlling rotary potentiometer mounted on aircraft steering wheel or aileron control  
[NASA-CASE-XAC-10019] c15 N71-23809
- Controlled release device for use in launching rockets or missiles  
[NASA-CASE-XKS-03338] c15 N71-24043
- Circuits for controlling reversible dc motor  
[NASA-CASE-XNP-07477] c09 N71-26092
- Digital memory system with multiple switch cores for driving each word location  
[NASA-CASE-XNP-01466] c10 N71-26434
- Fluid control jet amplifiers  
[NASA-CASE-XLE-09341] c12 N71-28741
- System for control of variable signal generator  
[NASA-CASE-NPO-11064] c07 N72-11150
- Solid state remote circuit selector switching circuit  
[NASA-CASE-LEW-10387] c09 N72-22201
- Development of device for simulating charge and discharge cycle of battery in synchronous orbit  
[NASA-CASE-GSC-11211-1] c03 N72-25020
- Bridge-type gain control circuit  
[NASA-CASE-GSC-10786-1] c10 N72-28241
- Interferometer prism and control system for precisely determining direction to remote light source  
[NASA-CASE-ARC-10278-1] c14 N73-25463
- Digital controller for a Baum folding machine --- providing automatic counting and machine shutoff  
[NASA-CASE-LAR-10688-1] c37 N74-21056
- Flow control valve --- for high temperature fluids  
[NASA-CASE-NPO-11951-1] c37 N74-21065
- Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c18 N75-27041
- Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c54 N77-32721
- Power factor control system for AC induction motors  
[NASA-CASE-MFS-23280-1] c33 N78-10376
- Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c37 N78-17384
- Control for nuclear thermionic power source  
[NASA-CASE-NFO-13114-2] c73 N78-28913
- Illumination control apparatus for compensating solar light  
[NASA-CASE-KSC-11010-1] c74 N79-12890
- Means for controlling aerodynamically induced twist --- equipment to control twisting of slender wings due to aerodynamic loads  
[NASA-CASE-LAR-12175-1] c05 N80-16055
- Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c35 N80-28686
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c54 N81-26718
- Method and apparatus for precision control of radiometer  
[NASA-CASE-NFC-15398-1] c35 N81-33449
- CONTROL ROCKETS**
- Unit for generating thrust from catalytic decomposition of hydrogen peroxide, for high altitude aircraft or spacecraft reaction control  
[NASA-CASE-XMS-00583] c28 N70-38504
- CONTROL RODS**
- Manual control mechanism for adjusting control rod to null position  
[NASA-CASE-XLA-01808] c15 N71-20740
- CONTROL SIMULATION**
- Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c54 N81-27806
- CONTROL STABILITY**
- Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c07 N81-19115
- CONTROL SURFACES**
- Conical valve plug for use with reactive cryogenic fluids  
[NASA-CASE-XLE-00715] c15 N70-34859
- Attitude control system for spacecraft based on conversion of incident solar radiation on movable control surfaces into mechanical torques  
[NASA-CASE-XNP-02982] c31 N70-41855
- Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c08 N79-14108
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c02 N81-14968
- Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c37 N81-15363
- CONTROL UNITS (COMPUTERS)**
- Self testing and repairing computer comprising control and diagnostic unit and rollback points for error correction  
[NASA-CASE-NPO-10567] c08 N71-24633
- CONTROL VALVES**
- Electromechanical actuator and its use in rocket thrust control valve  
[NASA-CASE-XNP-05975] c15 N69-23185
- Multiple orifice fluid flow control valve to provide different flow patterns  
[NASA-CASE-ERC-10208] c15 N70-10867
- Conical valve plug for use with reactive cryogenic fluids  
[NASA-CASE-XLE-00715] c15 N70-34859
- Control valve and coaxial variable injector for controlling bipropellant mixture ratio and flow  
[NASA-CASE-XNP-09702] c15 N71-17654
- Control valve for switching main stream of fluid from one stable position to another by means of electrohydrodynamic forces  
[NASA-CASE-NFO-10416] c12 N71-27332
- Force balanced throttle valve for fuel control in rocket engines  
[NASA-CASE-NPC-10808] c15 N71-27432
- Dual stage check valve for cryogenic supply systems used in space flight environmental control system  
[NASA-CASE-MSC-13587-1] c15 N73-30459
- Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c02 N74-20646
- Ultrasonically bonded valve assembly  
[NASA-CASE-NPC-13360-1] c37 N75-25185

- Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c37 N77-28487
- Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c37 N78-25426
- Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c37 N79-33468
- Quartz ball valve  
[NASA-CASE-NPO-14473-1] c37 N80-23654
- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c37 N81-17433
- Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c37 N81-33483
- Method and system for nuclear waste disposal --- control valves for encapsulating wastes  
[NASA-CASE-NPO-15454-1] c73 N82-12916
- CONTROLLED ATMOSPHERES**
- Rectangular electric conductors for conductor cables to withstand spacecraft vibration and controlled atmosphere  
[NASA-CASE-MFS-14741] c09 N70-20737
- High voltage pulse generator for testing flash and ignition limits of nonmetallic materials in controlled atmospheres  
[NASA-CASE-MSC-12178-1] c09 N71-13518
- System for continuous monitoring of exhalations, weighing, and cage cleaning for animal exposed to controlled atmosphere for toxic study  
[NASA-CASE-XAC-05333] c11 N71-22875
- CONTROLLERS**
- Unitary three-axis controller for flight vehicles within or outside atmosphere  
[NASA-CASE-XFR-00181] c21 N70-33279
- Two axis flight controller with potentiometer control shafts directly coupled to rotatable ball members  
[NASA-CASE-XFR-04104] c03 N70-42073
- Hand controller operable about three respectively perpendicular axes and capable of actuating signal generators for attitude control devices  
[NASA-CASE-XMS-07487] c15 N71-23255
- Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c08 N74-10942
- Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c33 N78-32340
- Active nutation controller  
[NASA-CASE-GSC-12273-1] c35 N80-21719
- Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c37 N81-17432
- Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c33 N81-20352
- Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c35 N81-33449
- Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c33 N82-11360
- CONVECTIVE FLOW**
- Design and development of device to prevent geysering during convective circulation of cryogenic fluids  
[NASA-CASE-RSC-10615] c15 N73-12486
- CONVECTIVE HEAT TRANSFER**
- Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NFO-10617-1] c35 N74-22095
- CONVERGENCE**
- Electrical device for developing converging spherical shock waves  
[NASA-CASE-MFS-20890] c14 N72-22439
- CONVERGENT NOZZLES**
- Nozzle extraction process and handlemeter for measuring handle  
[NASA-CASE-LAR-12147-1] c31 N79-11246
- CONVERGENT-DIVERGENT NOZZLES**
- Gimbaled partially submerged nozzle for solid propellant rocket engines for providing directional control  
[NASA-CASE-XMP-01544] c28 N70-34162
- Regenerative cooling system for rocket combustion chamber using coolant tubes in convergent-divergent nozzle  
[NASA-CASE-XLE-04857] c28 N71-23968
- Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c67 N80-32392
- Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c09 N82-11088
- CONVERTERS**
- Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c35 N76-16391
- CONVEYORS**
- System for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c02 N81-14967
- System and method for refurbishing and processing parachutes --- monorial conveyor system  
[NASA-CASE-KSC-11042-2] c02 N81-26073
- Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c25 N82-11147
- Acoustic system for material transport  
[NASA-CASE-NFO-15453-1] c71 N82-12889
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- Radiative cooler  
[NASA-CASE-NPO-15465-1] c18 N82-10106
- Stirling cycle cryogenic cooler --- magnetically suspended pistons  
[NASA-CASE-GSC-12697-1] c31 N82-11312
- COOLING**
- Microwave power receiving antenna solving heat dissipation problems by construction of elements as heat pipe devices  
[NASA-CASE-MFS-20333] c09 N71-13486
- Dissipative voltage regulator system for minimizing heat dissipation  
[NASA-CASE-GSC-10891-1] c10 N71-26626
- Cooling and radiation protection of ruby lasers using copper sulfate solution in alcohol  
[NASA-CASE-MFS-20180] c16 N72-12440
- Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c36 N77-25502
- Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c39 N80-25693
- Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c44 N81-24525
- COOLING SYSTEMS**
- Automatic thermal switch for improving efficiency of cooling gases below 40 K  
[NASA-CASE-XNP-03796] c23 N71-15467
- Differential thermopile for measuring cooling water temperature rise  
[NASA-CASE-XAC-00812] c14 N71-15598
- Electric power system with circulatory liquid coolant cooling system  
[NASA-CASE-MFS-14114-2] c09 N71-24807
- Portable cryogenic cooling system design including turbine pump, cooling chamber, and atomizer  
[NASA-CASE-NPO-10467] c23 N71-26654
- Development and characteristics of natural circulation radiator for use with nuclear power plants installed in lunar space stations  
[NASA-CASE-XHC-03673] c33 N71-29046
- Development and characteristics of cooling system to maintain temperature of rack mounted electronic modules  
[NASA-CASE-MSC-12389] c33 N71-29052
- Development of method for cooling high temperature wall members with cooling medium having high heat absorption capability  
[NASA-CASE-HQN-00938] c33 N71-29053
- Apparatus for liquid spray cooling of turbine blades  
[NASA-CASE-XLE-00027] c33 N71-29152
- Radial heat flux transformer for use in heating and cooling processes  
[NASA-CASE-NFC-10828] c33 N72-17948
- Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c34 N74-23066
- Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c33 N75-30430
- Rocket chamber and method of making  
[NASA-CASE-LEN-11118-2] c20 N76-14191
- Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c34 N77-19353
- Arc control in compact arc lamps  
[NASA-CASE-NPC-10870-1] c33 N77-22386
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEN-12830-1] c07 N77-23106



## COORDINATES

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- Oil cooling system for a gas turbine engine  
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- Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c31 N78-25256
- Cooling system for removing metabolic heat from  
an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721
- Heat exchanger --- rocket combustion chambers  
and cooling systems  
[NASA-CASE-LEW-12252-1] c34 N79-13288
- Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c34 N79-20336
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c45 N80-14579
- Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c44 N81-24519
- Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c44 N81-24525
- Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c05 N81-26114
- Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c33 N81-29344
- Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c34 N82-10358
- COORDINATES**
- Mechanical coordinate converter for use with  
spacecraft tracking antennas  
[NASA-CASE-XNP-00614] c14 N70-36907
- System for locating lightning strokes by  
coordination of directional antenna signals  
[NASA-CASE-KSC-10729-1] c09 N73-32110
- Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c04 N77-19056
- COPOLYMERS**
- Method for producing alternating ether-siloxane  
copolymers with stable properties when exposed  
to elevated temperatures and UV radiation  
[NASA-CASE-XMF-02584] c06 N71-20905
- Preparation of dicyanoacetylene and vinylidene  
copolymers using organic compounds  
[NASA-CASE-XNP-03250] c06 N71-23500
- Heat resistant polymers of oxidized  
styrylphosphine  
[NASA-CASE-MSC-14903-3] c27 N80-24438
- Insoluble polyelectrolyte and ion-exchange  
hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c25 N81-17187
- Alkaline battery containing a separator of a  
cross-linked copolymer of vinyl alcohol and  
unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c44 N81-29531
- COPPER**
- Development of method for etching copper  
[NASA-CASE-XGS-06306] c17 N71-16044
- Method of plating copper on aluminum to permit  
conventional soldering of structural aluminum  
bodies  
[NASA-CASE-XLA-08966-1] c17 N71-25903
- Brazing alloy composition  
[NASA-CASE-XMF-06053] c26 N75-27126
- Method for making an aluminum or copper  
substrate panel for selective absorption of  
solar energy  
[NASA-CASE-MFS-23518-1] c44 N79-11469
- COPPER ALLOYS**
- Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c26 N77-20201
- COPPER COMPOUNDS**
- Gallium arsenide solar cell preparation by  
surface deposition of cuprous iodide on thin  
n-type polycrystalline layers and heating in  
iodine vapor  
[NASA-CASE-XNP-01960] c09 N71-23027
- Cooling and radiation protection of ruby lasers  
using copper sulfate solution in alcohol  
[NASA-CASE-MFS-20180] c16 N72-12440
- Brazing alloy  
[NASA-CASE-XNP-03878] c26 N75-27127
- COPPER FLUORIDES**
- Method to produce high purity copper fluoride by  
heating copper hydroxyfluoride powder and  
subjecting to flowing fluorine gas  
[NASA-CASE-LEW-10794-1] c06 N72-17093
- CORDAGE**
- Fabrication of root cord restrained fabric suit  
sections from sheets of fabric
- [NASA-CASE-MSC-12398] c05 N72-20098
- CORE STORAGE**
- Memory device employing semiconductor and  
ferroelectric properties of single crystal  
barium titanate  
[NASA-CASE-ERC-10307] c08 N72-21198
- CORES**
- Method of making rolling element bearings  
[NASA-CASE-LEW-11087-2] c37 N74-15128
- Electromagnetic transducer recording head having  
a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c35 N77-21392
- CORK (MATERIALS)**
- Cork-resin ablative insulation for complex  
surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c24 N80-26388
- CORRECTION**
- Doppler frequency shift correction device for  
multiplex communication with Applications  
Technology Satellites  
[NASA-CASE-XGS-02749] c07 N69-39978
- CORRELATION DETECTION**
- Correlation type phase detector --- with time  
correlation integrator for frequency  
multiplexed signals  
[NASA-CASE-GSC-11744-1] c33 N75-26243
- Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c32 N78-18266
- Interferometric locating system  
[NASA-CASE-NPO-14173-1] c04 N80-32359
- CORRELATORS**
- Synchronous detection system for detecting weak  
radio astronomical signals  
[NASA-CASE-XNP-09832] c30 N71-23723
- Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c32 N79-14267
- Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c32 N79-28383
- Baseband signal combiner for large aperture  
antenna array  
[NASA-CASE-NPO-14641-1] c32 N81-29308
- A pipelined digital SAR azimuth correlator using  
hybrid FFT/transversal-filter  
[NASA-CASE-MEG-15519-1] c32 N82-12298
- CORROSION**
- Method of neutralizing the corrosive surface of  
amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c27 N82-10227
- CORROSION PREVENTION**
- Vapor deposited laminated nitride-silicon  
coating for corrosion prevention of  
carbonaceous surfaces  
[NASA-CASE-XLA-00284] c15 N71-16075
- Method to prevent stress corrosion cracking in  
titanium alloys  
[NASA-CASE-NPO-10271] c17 N71-16393
- Method and apparatus for inducing compressive  
stresses in pressure vessel to prevent stress  
corrosion  
[NASA-CASE-XLA-07390] c15 N71-18616
- Development of fluoride coating to prevent  
oxidation of beryllium surfaces at elevated  
temperatures  
[NASA-CASE-LEW-10327] c17 N71-33408
- Prevention of hydrogen embrittlement of high  
strength steel by hydrazine compositions ---  
by adding potassium hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c24 N76-14203
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c45 N80-14579
- CORROSION RESISTANCE**
- High strength, corrosion resistant cobalt-based  
alloys for aerospace structures  
[NASA-CASE-XLE-00726] c17 N71-15644
- Hydrazine monoperfluoro alkanoate solder flux  
leaving corrosion resistant coating, for  
metals such as copper  
[NASA-CASE-XNP-03459-2] c18 N71-15688
- High temperature cobalt-base alloy resistant to  
corrosion by liquid metals and to sublimation  
in vacuum environment  
[NASA-CASE-XLE-02991] c17 N71-16025
- Metal soldering with hydrazine monoperfluoro  
alkanoate for corrosion resistant coatings  
[NASA-CASE-XNP-03459] c15 N71-21078
- Method of making bearing material  
[NASA-CASE-LEW-11930-3] c24 N80-33482
- Corrosion resistant thermal barrier coating ---  
protecting gas turbines and other engine parts

[NASA-CASE-LEW-13088-1] c26 N81-25188  
Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c37 N81-25371  
**CORRUGATING**  
Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c32 N80-29539  
**COSINE SERIES**  
Service life of electromechanical device for  
generating sine/cosine functions  
[NASA-CASE-LAR-10503-1] c09 N72-21248  
Function generators for producing complex  
vibration mode patterns used to identify  
vibration mode data  
[NASA-CASE-LAR-10310-1] c10 N73-20253  
**COSMIC DUST**  
Sensor for detecting and measuring energy,  
velocity and direction of travel of a cosmic  
dust particle  
[NASA-CASE-GSC-10503-1] c14 N72-20381  
System for detecting impact position of cosmic  
dust on detector surface  
[NASA-CASE-GSC-11291-1] c25 N72-33696  
Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c35 N75-27331  
Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c35 N76-15431  
**COST ANALYSIS**  
Low cost solar energy collection system  
[NASA-CASE-NFO-13579-1] c44 N78-17460  
**COST REDUCTION**  
An improved synthesis of 2,4,8,10-tetroxaspiro  
(5.5) undecane  
[NASA-CASE-ARC-11243-2] c23 N80-31472  
**COUCHES**  
Shock absorbing couch for body support under  
high acceleration or deceleration forces  
[NASA-CASE-XMS-01240] c05 N70-35152  
Low onset rate energy absorber in form of strut  
assembly for crew couch of Apollo command module  
[NASA-CASE-MSC-12279-1] c15 N70-35679  
Shock absorbing articulated multiple couch  
assembly  
[NASA-CASE-MSC-11253] c05 N71-12343  
Collapsible couch system for manned space vehicles  
[NASA-CASE-MSC-13140] c05 N72-11085  
**COULOMETERS**  
Alkaline-type coulometer cell for primary charge  
control in secondary battery recharge circuits  
[NASA-CASE-XGS-05434] c03 N71-20491  
Development and characteristics of battery  
charging circuits with coulometer for control  
of available current  
[NASA-CASE-GSC-10487-1] c03 N71-24719  
**COUNTERS**  
Circuit for measuring wide range of pulse rates  
by utilizing high capacity counter  
[NASA-CASE-XNP-06234] c10 N71-27137  
Electronic strain level counter on in-flight  
aircraft  
[NASA-CASE-LAR-16756-1] c32 N73-26910  
Electrochemical detection device --- for use in  
microbiology  
[NASA-CASE-LAR-11922-1] c25 N79-24073  
Film advance indicator  
[NASA-CASE-LAR-12474-1] c35 N80-31774  
Redundant operation of counter modules  
[NASA-CASE-NFO-14162-1] c60 N81-15706  
Apparatus and process for microbial detection  
and enumeration  
[NASA-CASE-LAR-12709-1] c51 N81-29727  
**COUNTING CIRCUITS**  
Rocket-borne aspect sensor consisting of  
radiation sensor, apertured disk, commutator,  
and counting circuits  
[NASA-CASE-XGS-08266] c14 N69-27432  
Design of transistorized ring counter circuit  
with special steering and triggering circuits  
[NASA-CASE-XGS-03095] c09 N69-27463  
Counter-divider circuit for accuracy and  
reliability in binary circuits  
[NASA-CASE-XNP-00421] c09 N70-34502  
Reversible ring counter using cascaded single  
silicon controlled rectifier stages  
[NASA-CASE-XGS-01473] c09 N71-10673  
Capacitor sandwich structure containing metal  
sheets of known thickness for counting  
penetration rates of meteoroids  
[NASA-CASE-XLE-01246] c14 N71-10797

Electronic counter circuit utilizing magnetic  
core and low power consumption  
[NASA-CASE-XNP-08836] c09 N71-12515  
Synchronous counter design incorporating  
cascaded binary stages driven by previous  
stages and inputs through NAND gates  
[NASA-CASE-XGS-02440] c08 N71-19432  
Digital cardiometer incorporating circuit  
for measuring heartbeat rate of subject over  
predetermined portion of one minute also  
converting rate to beats per minute  
[NASA-CASE-XMS-02399] c05 N71-22896  
Computer circuit performing both counting and  
shifting logic operations also capable of  
miniaturization and integration in basic  
circuits  
[NASA-CASE-XNP-01753] c08 N71-22897  
Noninterruptable digital counter circuit design  
with display device for pulse frequency  
modulation  
[NASA-CASE-XNP-09759] c08 N71-24891  
Frequency measurement by coincidence detection  
with standard frequency  
[NASA-CASE-MSC-14649-1] c33 N76-16331  
Redundant operation of counter modules  
[NASA-CASE-NFO-14162-1] c60 N81-15706  
**COUPLING**  
Coupling device for linear shaped charge for  
space vehicle abort system  
[NASA-CASE-XLA-00189] c33 N70-36846  
Base support for expandable and contractible  
coupling between two members  
[NASA-CASE-NFO-11059] c15 N72-17454  
**COUPLING CIRCUITS**  
Interrogator and current driver circuit for  
combination with transistor flip-flop circuit  
[NASA-CASE-XGS-03058] c10 N71-19547  
Antenna array at focal plane of reflector with  
coupling network for beam switching  
[NASA-CASE-GSC-10220-1] c07 N71-27233  
Phase modulator with tuned variable length  
electrical lines including coupling and  
varactor diode circuits  
[NASA-CASE-MSC-13201-1] c07 N71-28429  
High efficiency transformerless amplitude  
modulator coupled to RF power amplifier  
[NASA-CASE-GSC-10668-1] c07 N71-28430  
Automatic quadrature control and measuring system  
--- using optical coupling circuitry  
[NASA-CASE-MPS-21660-1] c35 N74-21017  
Diode-quad bridge circuit means  
[NASA-CASE-ABC-10364-3] c33 N75-19520  
**COUPLINGS**  
Releasable coupling device designed to receive  
and retain matching ends of electrical  
connectors  
[NASA-CASE-XMS-07846-1] c09 N69-21927  
Stage separation using remote control release of  
joint with explosive insert  
[NASA-CASE-XLA-02854] c15 N69-27490  
Space vehicle stage coupling and quick release  
separation mechanism  
[NASA-CASE-XLA-01441] c15 N70-41679  
Standard coupling design for mass production  
[NASA-CASE-XMS-02532] c15 N70-41808  
Quick-release coupling for fueling rocket  
vehicles with cryogenic propellants  
[NASA-CASE-XKS-01985] c15 N71-10782  
Batchet mechanism for high speed operation at  
reduced backlash  
[NASA-CASE-MPS-12805] c15 N71-17805  
Split nut and bolt separation device  
[NASA-CASE-XNP-06914] c15 N71-21489  
Quick disconnect duct coupling device for  
single-handed operation  
[NASA-CASE-MPS-20395] c15 N71-24903  
Coupling arrangement for isolating torque loads  
from axial, radial, and bending loads  
[NASA-CASE-XLA-04897] c15 N72-22482  
Refrigerated coaxial coupling --- for microwave  
equipment  
[NASA-CASE-NPO-13504-1] c33 N75-30430  
Opto-mechanical subsystem with temperature  
compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772  
Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c37 N80-14398

- Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c37 N81-14320
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c51 N81-14605
- COVERINGS**
- Apparatus for ejecting covers of instrument packages using differential pressure principle  
[NASA-CASE-XMF-04132] c15 N69-27502
- CRACKING (FRACTURING)**
- Method to prevent stress corrosion cracking in titanium alloys  
[NASA-CASE-NPO-10271] c17 N71-16393
- TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c39 N78-16387
- CRASH LANDING**
- Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c03 N76-32140
- CREEP RUPTURE STRENGTH**
- Nickel base alloy with resistance to oxidation at high temperatures and superior stress-rupture properties  
[NASA-CASE-XLE-02082] c17 N71-16026
- CRITICAL EXPERIMENTS**
- Apparatus and process for volumetrically dispensing reagent quantities of volatile chemicals for small batch reactions  
[NASA-CASE-NPO-10070] c15 N71-27372
- CRITICAL TEMPERATURE**
- Stable superconducting magnet --- high current levels below critical temperature  
[NASA-CASE-XMF-05373-1] c33 N79-21264
- CROSS CORRELATION**
- Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c38 N78-17395
- CROSS FLOW**
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c02 N81-14568
- CROSS POLARIZATION**
- Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c33 N81-26358
- CROSSED FIELDS**
- Crossed-field plasma accelerator for laboratory simulation of atmospheric reentry conditions  
[NASA-CASE-XLA-06675] c25 N70-33267
- Direct conversion of thermal energy into electrical energy using crossed electric and magnetic fields  
[NASA-CASE-XLE-00212] c03 N70-34134
- Crossed field MHD plasma generator-accelerator  
[NASA-CASE-XLA-03374] c25 N71-15562
- CROSSLINKING**
- New trifunctional alcohol derived from trimer acid and novel method of preparation  
[NASA-CASE-NPO-10714] c06 N69-31244
- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c27 N78-15276
- Polymeric foams from cross-linkable poly-m-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232
- In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c44 N79-25481
- Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c27 N79-28307
- Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c27 N80-32516
- Thermoset-thermoplastic aromatic polyamides  
[NASA-CASE-LAR-12723-1] c27 N81-15107
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c27 N81-17259
- The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c27 N81-17262
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c27 N81-24257
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13504-1] c27 N81-27279
- Cross-linked polyvinyl alcohol and method of making same
- [NASA-CASE-LEW-13101-2] c23 N81-29160
- Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c44 N81-29531
- CRUCIBLES**
- Evaporating crucible of tantalum-tungsten foil, nickel alumina bonding agent, and ceramic coating  
[NASA-CASE-XLA-03105] c15 N69-27483
- CRUCIFORM WINGS**
- Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c05 N81-32138
- CRUDE OIL**
- Decontamination of petroleum products with honey  
[NASA-CASE-XMF-03835] c06 N71-23499
- CRUSTAL FRACTURES**
- System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c46 N80-14603
- CRYOGENIC COOLING**
- Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NFC-14253-1] c32 N80-32605
- Low cost cryostat  
[NASA-CASE-NPO-14513-1] c35 N81-14287
- Refrigerator module, system and process --- regenerative, cryogenic cooling of an infrared radiation detection system  
[NASA-CASE-ARC-11263-1] c31 N81-27328
- Stirling cycle cryogenic cooler --- magnetically suspended pistons  
[NASA-CASE-GSC-12697-1] c31 N82-11312
- CRYOGENIC EQUIPMENT**
- Gas balancing, cryogenic refrigeration apparatus with Joule-Thomson valve assembly  
[NASA-CASE-NPO-10309] c15 N69-23190
- Low thermal loss piping arrangement for moving cryogenic media through double chamber structure  
[NASA-CASE-XMF-08882] c15 N69-39935
- Method and apparatus for removing plastic insulation from wire using cryogenic equipment  
[NASA-CASE-MFS-10340] c15 N71-17628
- Dual solid cryogenics for spacecraft refrigeration insuring low temperature cooling for extended periods  
[NASA-CASE-GSC-10188-1] c23 N71-24725
- Reliability of automatic refilling valving device for cryogenic liquid systems  
[NASA-CASE-NPO-11177] c15 N72-17453
- Dual stage check valve for cryogenic supply systems used in space flight environmental control system  
[NASA-CASE-MSC-13587-1] c15 N73-30459
- Heat operated cryogenic electrical generator  
[NASA-CASE-NFO-13303-1] c20 N75-24837
- Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c31 N77-10229
- Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c35 N77-22450
- Multistation refrigeration system  
[NASA-CASE-NFC-13839-1] c31 N78-25256
- System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c51 N79-10694
- Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c37 N79-28549
- Low temperature latching solenoid  
[NASA-CASE-MSC-18106-1] c33 N82-11357
- CRYOGENIC FLUID STORAGE**
- Apparatus for cryogenic liquid storage with heat transfer reduction and for liquid transfer at zero gravity conditions  
[NASA-CASE-XLE-00345] c15 N70-38020
- Cryogenic storage system for gases onboard spacecraft  
[NASA-CASE-XMS-04390] c31 N70-41871
- Carbon dioxide purge systems to prevent condensation in spaces between cryogenic fuel tanks and hypersonic vehicle skin  
[NASA-CASE-XLA-01967] c31 N70-42015
- Fabrication of filament wound propellant tank for cryogenic storage  
[NASA-CASE-XLE-03803-2] c15 N71-17651
- Prefabricated multilayered self-evacuating insulation panels using gas with low vapor

- pressure at cryogenic temperatures for application to storage of cryogenics  
[NASA-CASE-XLE-04222] c23 N71-22881
- Multilayer insulation panels for cryogenic liquid containers  
[NASA-CASE-MFS-14023] c33 N71-25351
- Development of thermal insulation material for insulating liquid hydrogen tanks in spacecraft  
[NASA-CASE-XMF-05046] c33 N71-28892
- Apparatus for aligning shadow shields and cryogenic storage tanks in outer space with the sun  
[NASA-CASE-KSC-10622-1] c31 N72-21893
- Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c35 N74-15093
- Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c31 N79-21225
- Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c37 N80-18393
- CRYOGENIC FLUIDS**
- Cryogenic flux-gated magnetometer using superconductors  
[NASA-CASE-XAC-02407] c14 N69-27423
- Fuel tank pressure-relief device for venting cryogenic liquid vapors through tubes with porous plug  
[NASA-CASE-XLE-00288] c15 N70-34247
- Conical valve plug for use with reactive cryogenic fluids  
[NASA-CASE-XLE-00715] c15 N70-34859
- Two component valve assembly for cryogenic liquid transfer regulation  
[NASA-CASE-XLE-00397] c15 N70-36492
- Measuring density of single and two-phase cryogenic fluids in rocket fuel tanks  
[NASA-CASE-XLE-00688] c14 N70-41330
- Leakproof soft metal seal for use in very high vacuum systems operating at cryogenic temperatures  
[NASA-CASE-XGS-02441] c15 N70-41629
- High pressure liquid flow sight assembly for wide temperature range applications including cryogenic fluids  
[NASA-CASE-XLE-02998] c14 N70-42074
- Automatic thermal switch for improving efficiency of cooling gases below 40 K  
[NASA-CASE-XNP-03796] c23 N71-15467
- Describing apparatus for separating gas from cryogenic liquid under zero gravity and for venting gas from fuel tank  
[NASA-CASE-XLE-00586] c15 N71-15968
- Development of apparatus for measuring thermal conductivity  
[NASA-CASE-XGS-01052] c14 N71-15992
- Method and apparatus for producing fine particles in cryogenic liquid bath for gelled rocket propellants  
[NASA-CASE-NPO-10250] c23 N71-16212
- Superconducting alternator design with cryogenic fluid for cooling windings below critical temperature  
[NASA-CASE-XLE-02823] c09 N71-23443
- Flow angle sensor and remote readout system for use with cryogenic fluids  
[NASA-CASE-XLE-04503] c14 N71-24864
- Design and development of device to prevent geysering during convective circulation of cryogenic fluids  
[NASA-CASE-KSC-10615] c15 N73-12486
- Magnetocaloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c37 N74-27904
- Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c35 N77-21393
- CRYOGENIC GYROSCOPES**
- Cryogenic gyroscope housing --- with annular disks for gas spin-up  
[NASA-CASE-MFS-21136-1] c35 N74-18323
- CRYOGENIC MAGNETS**
- Improved alternator with windings of superconducting materials acting as permanent magnet  
[NASA-CASE-XLE-02824] c03 N69-35890
- CRYOGENIC ROCKET PROPELLANTS**
- Quick-release coupling for fueling rocket vehicles with cryogenic propellants  
[NASA-CASE-XKS-01985] c15 N71-10782
- Hot-wire liquid level detector for cryogenic propellants  
[NASA-CASE-XLE-00454] c23 N71-17802
- Automatically reciprocating, high pressure pump for use in spacecraft cryogenic propellants  
[NASA-CASE-XMF-04731] c15 N71-24042
- CRYOGENIC STORAGE**
- Light weight plastic foam thermal insulation for cryogenic storage  
[NASA-CASE-XLE-02647] c18 N71-23658
- Development of foam insulation for filament wound cryogenic storage tank  
[NASA-CASE-XLE-03803] c15 N71-23816
- CRYOGENICS**
- High strength aluminum casting alloy for cryogenic applications in aerospace engineering  
[NASA-CASE-XMF-02786] c17 N71-20743
- Portable cryogenic cooling system design including turbine pump, cooling chamber, and atomizer  
[NASA-CASE-NFC-10467] c23 N71-26654
- Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c33 N78-13320
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c36 N80-18372
- High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c26 N80-32484
- Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c74 N80-33210
- Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NFO-10424-1] c27 N81-24258
- CRYOLITE**
- Ultraviolet filter of thorium fluoride and cryolite on quartz base  
[NASA-CASE-INP-02340] c23 N69-24332
- CRYOSTATS**
- Cryostat for flexure fatigue testing of composite materials  
[NASA-CASE-XMF-02964] c14 N71-17659
- Cryostat for use with horizontal fatigue testing machines at low temperatures  
[NASA-CASE-XMF-10968] c14 N71-24234
- Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c35 N74-15093
- Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NFO-13459-1] c31 N77-10229
- Low cost cryostat  
[NASA-CASE-NPC-14513-1] c35 N81-14287
- CRYOTRAPPING**
- Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c28 N80-20402
- CRYSTAL DEFECTS**
- Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NFO-13918-1] c76 N79-11920
- CRYSTAL FILTERS**
- Infrared tunable dye laser with nonlinear wavelength mixing crystal in optical cavity  
[NASA-CASE-ARC-10463-1] c09 N73-32111
- Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c74 N79-14891
- Inductorless narrow-band filter/amplifier  
[NASA-CASE-GSC-12410-1] c33 N79-24260
- CRYSTAL GROWTH**
- Device for producing high purity silicon carbide on carbon base by hydrogen reduction of silicon tetrachloride  
[NASA-CASE-XLA-02057] c26 N70-40015
- Electrodeposition method for producing crystalline material from dense gaseous medium  
[NASA-CASE-NFC-10440] c15 N72-21466
- Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAE-11144-1] c25 N75-26043
- Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c76 N76-25049
- Method of crystallization --- in gravity-free environments  
[NASA-CASE-MFS-23001-1] c76 N77-32919
- Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c35 N78-17359
- Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c76 N79-11920

- Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c76 N79-23798
- Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c44 N80-24741
- Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c76 N80-32244
- Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c76 N80-32245
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c33 N81-19389
- Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c76 N81-19944
- CRYSTAL LATTICES**
- Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c76 N78-24950
- CRYSTAL OSCILLATORS**
- Describing crystal oscillator instrument for detecting condensable gas contaminants in vacuum apparatus  
[NASA-CASE-NPO-10144] c14 N71-17701
- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c33 N80-23559
- CRYSTAL RECTIFIERS**
- Turn on current transient limiter for controlling peak current flow in high capacity load  
[NASA-CASE-GSC-10413] c10 N71-26531
- CRYSTAL STRUCTURE**
- Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c24 N77-27187
- CRYSTALLINITY**
- Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c27 N80-16158
- CRYSTALLIZATION**
- Method of crystallization --- in gravity-free environments  
[NASA-CASE-MFS-23001-1] c76 N77-32519
- CRYSTALS**
- Brushless dc tachometer design with Hall effect crystals and output voltage magnitude proportional to rotor speed  
[NASA-CASE-MFS-20385] c09 N71-24904
- Method and apparatus for slicing crystals  
[NASA-CASE-GSC-12291-1] c76 N80-18951
- Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c76 N80-32246
- CUES**
- Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c54 N81-27806
- CUFFS**
- Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c52 N82-11770
- CULTURE TECHNIQUES**
- Development of variable angle device for positioning test tubes to permit optimum drying of culture medium  
[NASA-CASE-LAR-10507-1] c11 N72-25284
- Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
[NASA-CASE-LAR-11074-1] c51 N75-13502
- Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c35 N75-27330
- Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c25 N79-24073
- Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c51 N81-28698
- Enhancement of in vitro Guayule propagation  
[NASA-CASE-NPO-15213-1] c51 N81-29728
- Method and apparatus for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c51 N82-12739
- CURIE TEMPERATURE**
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c76 N79-16678
- CURING**
- Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c27 N78-32260
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-1] c27 N80-26447
- Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c27 N81-17260
- Resin composition, process for producing the same, product produced therefrom and process for producing said product  
[NASA-CASE-ARC-11331-1] c27 N81-31363
- CURRENT AMPLIFIERS**
- Tuned analog network --- bandpass filter networks  
[NASA-CASE-GSC-12650-1] c33 N82-10324
- CURRENT DENSITY**
- Solid state switching circuit design to increase current capacity of low rated relay contacts  
[NASA-CASE-XNP-09228] c09 N69-27500
- Technique and equipment for sputtering using apertured electrode and pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c17 N73-24569
- Stable superconducting magnet --- high current levels below critical temperature  
[NASA-CASE-XMF-05373-1] c33 N79-21264
- Catalyst surfaces for the chromous/chronic redox couple  
[NASA-CASE-LEW-13148-2] c44 N81-29524
- CURRENT DISTRIBUTION**
- Distribution of currents to circuits using electrical adaptor  
[NASA-CASE-XLA-01288] c09 N69-21470
- Electron bombardment ion rocket engine with improved propellant introduction system  
[NASA-CASE-XLE-02066] c28 N71-15661
- Reversible current directing circuitry for reversible motor control  
[NASA-CASE-XLA-09371] c10 N71-18724
- Electric circuit for reversing direction of current flow  
[NASA-CASE-XNP-00952] c10 N71-23271
- Load insensitive electrical device --- power converters for supplying direct current at one voltage from a source at another voltage  
[NASA-CASE-XER-11046-2] c33 N74-22864
- CURRENT REGULATORS**
- Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c09 N69-24318
- Automatic baseline stabilization for ionization detector used in gas chromatograph  
[NASA-CASE-XNP-03128] c10 N70-41991
- Describing magnetic core current switching device for steering bipolar current pulses to memory units  
[NASA-CASE-NPO-10201] c08 N71-18694
- Switching series regulator with gating control network  
[NASA-CASE-XMS-09352] c09 N71-23316
- Magnetic current regulator for saturable core transformer  
[NASA-CASE-ERC-10075] c09 N71-24800
- Automatic power supply circuit design for driving inductive loads and minimizing power consumption including solenoid example  
[NASA-CASE-NPO-10716] c09 N71-24892
- Turn on current transient limiter for controlling peak current flow in high capacity load  
[NASA-CASE-GSC-10413] c10 N71-26531
- Current regulating voltage divider design with load current shunting  
[NASA-CASE-MFS-20935] c09 N71-34212
- Circuit for monitoring power supply by ripple current indication  
[NASA-CASE-KSC-10162] c09 N72-11225
- Inrush current limiter  
[NASA-CASE-GSC-11789-1] c33 N77-14333
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c33 N79-24257
- Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c33 N81-12330

- Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c33 N82-11360
- CURVATURE**  
Apparatus and method for spin forming tubular elbows with high strength, uniform thickness, and close tolerances  
[NASA-CASE-XMF-01083] c15 N71-22723  
Two degree inverted flexure from single block of material  
[NASA-CASE-ARC-10345-1] c15 N73-12488
- CURVE FITTING**  
Simulating voltage-current characteristic curves of solar cell panel with different operational parameters  
[NASA-CASE-XMS-01554] c10 N71-10578
- CURVED PANELS**  
Fabrication of curved reflector segments for solar mirror  
[NASA-CASE-XLE-08917] c15 N71-15597  
Method and apparatus for fowling of instrument panels to improve radio frequency shielded enclosure  
[NASA-CASE-XMF-09422] c07 N71-19436  
Space erectable rollup solar array of arcuate solar panels furled on tapered drum for spacecraft storage during launch  
[NASA-CASE-NFO-10188] c03 N71-20273  
Forming mold for polishing and machining curved solar magnesium reflector with reinforcing ribs  
[NASA-CASE-XLE-08917-2] c15 N71-24836  
Variable contour securing system  
[NASA-CASE-MSC-16270-1] c37 N78-27423
- CUSHIONS**  
Seat cushion to provide realistic acceleration cues to aircraft simulator pilot  
[NASA-CASE-LAR-12149-2] c09 N79-31228
- CUTTERS**  
Description of device for aligning stacked sheets of paper for repetitive cutting  
[NASA-CASE-XMS-04178] c15 N71-22798  
Portable cutting machine for piping weld preparation  
[NASA-CASE-XKS-07953] c15 N71-26134  
Precision surface cutter for screen circuit negatives and other microcircuits  
[NASA-CASE-XLA-05843] c15 N72-27485  
Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c37 N74-25968  
Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c37 N74-27905  
Ophthalmic liquifaction pump  
[NASA-CASE-LEW-12051-1] c52 N75-33640  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c43 N79-25443  
Open ended ratchet type tubing cutter  
[NASA-CASE-MSC-16538-1] c37 N80-22703  
System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c37 N80-29703  
Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c76 N80-32246
- CUTTING**  
Ellipsograph for describing and cutting ellipses with minimal axial dimensions  
[NASA-CASE-XLA-03102] c14 N71-21079  
Precision alignment apparatus for cutting a workpiece  
[NASA-CASE-LAR-11658-1] c37 N77-14478  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c03 N81-29107
- CYANATES**  
Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c25 N80-16116
- CYCLES**  
Pneumatic system for cyclic control of fluid flow in pneumatic device  
[NASA-CASE-XMS-04843] c03 N69-21469  
Multistage feedback shift register with states decomposable into cycles of equal length  
[NASA-CASE-NPO-11082] c08 N72-22167
- CYCLIC ACCELERATORS**  
Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c37 N77-19458
- CYCLIC HYDROCARBONS**  
Para-benzoquinone dioxide and concentrated mineral acid processed to yield intumescent or fire resistant, heat insulating materials  
[NASA-CASE-ARC-10304-1] c18 N73-26572
- CYCLIC LOADS**  
Automatic controlled thermal fatigue testing apparatus  
[NASA-CASE-XLA-02059] c33 N71-24276  
Development of device for simulating cyclic thermal loading of flexible materials by application of mechanical stresses and deformations  
[NASA-CASE-LAR-10270-1] c32 N72-25877  
Material testing system with load sensor for applying and measuring cyclic tensile and compressive loads to test specimens  
[NASA-CASE-MFS-20673] c14 N73-20476
- CYCLOTRON RADIATION**  
Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c25 N78-27226
- CYCLOTRON RESONANCE**  
Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c72 N80-27163
- CYCLOTRON RESONANCE DEVICES**  
Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c72 N80-27163  
Gyrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c33 N81-16384
- CYLINDRICAL ANTENNAS**  
Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c32 N76-18295
- CYLINDRICAL BODIES**  
Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c36 N74-20009  
Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c02 N81-14968
- CYLINDRICAL CHAMBERS**  
Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c37 N81-12422
- CYSTS**  
Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c52 N79-14751
- D**
- DAMPING**  
Dynamic precession damping of spin-stabilized vehicles by using rate gyroscope and angular accelerometer  
[NASA-CASE-XLA-01989] c21 N70-34295  
Slosh damping method for liquid rocket propellant tanks  
[NASA-CASE-XMF-00658] c12 N70-38997  
Utilization of momentum devices for forming attitude control and damping system for spacecraft  
[NASA-CASE-XLA-02551] c21 N71-21708  
Three stage motion restraining mechanism for restraining and damping three dimensional vibrational movement of gimballed package during launch of spacecraft  
[NASA-CASE-GSC-10306-1] c15 N71-24694  
Nutation damper for use on spinning body  
[NASA-CASE-GSC-11205-1] c15 N73-25513  
Development of electrical circuit for suppressing oscillations across inductor operating in resonant mode  
[NASA-CASE-ERC-10403-1] c10 N73-26228
- DATA ACQUISITION**  
Conversion system for increasing resolution of analog to digital converters  
[NASA-CASE-XAC-00404] c08 N70-40125  
Development of telemetry system for position location and data acquisition  
[NASA-CASE-GSC-10083-1] c30 N71-16090  
Data acquisition system for converting displayed analog signal to digital values  
[NASA-CASE-NPO-10344] c10 N71-26544  
Data acquisition and processing system with buffer storage and timing device for magnetic tape recording of PCM data and timing information  
[NASA-CASE-NPC-12107] c08 N71-27255  
Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c32 N75-15854

Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c52 N79-10724

**DATA COLLECTION PLATFORMS**

Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c15 N75-130C7

**DATA COMPRESSION**

Minimum time delay unit for conventional time multiplexed data compression channels  
[NASA-CASE-XNP-08832] c08 N71-12506

Data compression processor for monitoring analog signals by sampling procedure  
[NASA-CASE-NPO-10068] c08 N71-19288

Wide range analog data compression system  
[NASA-CASE-XGS-02612] c08 N71-19435

Apparatus with summing network for compression of analog data by decreasing slope threshold sampling  
[NASA-CASE-NPO-10769] c08 N72-11171

Data reduction and transmission system for TV PCM data  
[NASA-CASE-NPO-11243] c07 N72-20154

Gated compressor, distortionless signal limiter  
[NASA-CASE-NFO-11820-1] c32 N74-19788

Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NFO-13545-1] c32 N77-12240

Sampling video compression system  
[NASA-CASE-ARC-10984-1] c32 N77-24328

**DATA CONVERTERS**

Logarithmic converter for compressing 19-digit binary input number to 8-digit output  
[NASA-CASE-XLA-00471] c08 N70-34778

Mechanical coordinate converter for use with spacecraft tracking antennas  
[NASA-CASE-XNP-00614] c14 N70-36907

Analog signal to discrete time converter  
[NASA-CASE-ERC-10048] c09 N72-25251

Digital converter for scaling binary number to binary coded decimal number of higher multiple  
[NASA-CASE-KSC-10595] c08 N73-12176

Image data rate converter having a drum with a fixed head and a rotatable head  
[NASA-CASE-NPO-11659-1] c35 N74-11283

Electronic analog divider  
[NASA-CASE-LEW-11881-1] c33 N77-17354

Digital demodulator  
[NASA-CASE-LAR-12659-1] c33 N80-31731

**DATA CORRELATION**

An instrument for determining coincidence and elapse time between independent sources of random sequential events  
[NASA-CASE-LAR-12531-1] c35 N81-31529

**DATA LINKS**

Characteristics of two channel telemetry system with two data rate channels for high and low data rate communication  
[NASA-CASE-NPO-11572] c07 N73-16121

Automatic accounting system for transfer of data from terminals to computer  
[NASA-CASE-NPO-11456] c08 N73-26176

Multi-computer multiple data path hardware exchange system  
[NASA-CASE-NPO-13422-1] c60 N76-14818

Apparatus for simulating optical transmission links  
[NASA-CASE-GSC-11877-1] c74 N76-18913

**DATA MANAGEMENT**

Selective data segment monitoring system --- using shift registers  
[NASA-CASE-ARC-10899-1] c60 N77-19760

**DATA PROCESSING**

Data processing and display system for terminal guidance of X-15 aircraft  
[NASA-CASE-XFR-00756] c02 N71-13421

Encoders designed to generate comma free biorthogonal Reed-Muller type code comprising conversion of 64 6-bit words into 64 32-bit data for communication purposes  
[NASA-CASE-NFO-10595] c10 N71-25917

Data acquisition and processing system with buffer storage and timing device for magnetic tape recording of PCM data and timing information  
[NASA-CASE-NPO-12107] c08 N71-27255

Digital data handling circuits for pulse amplifiers  
[NASA-CASE-XNP-01068] c10 N71-26739

Synchronized digital communication system  
[NASA-CASE-XNP-03623] c09 N73-28084

Image data rate converter having a drum with a fixed head and a rotatable head  
[NASA-CASE-NPO-11659-1] c35 N74-11283

Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c32 N77-32342

Interactive color display for multispectral imagery using correlation clustering  
[NASA-CASE-MSC-16253-1] c32 N79-20297

High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NFC-14554-1] c60 N81-27814

**DATA PROCESSING EQUIPMENT**

Data processor having multiple sections activated at different times by selective power coupling to sections  
[NASA-CASE-XGS-04767] c08 N71-12494

Development of demodulation system for removing amplitude modulation from two quadrature displaced data bearing signals  
[NASA-CASE-XAC-04030] c10 N71-19472

Development and characteristics of rate augmented digital to analog converter for computed time-dependent data  
[NASA-CASE-XLA-07828] c08 N71-27057

Data processor with plural register stages for selectively interconnecting with each other to effect multiplicity of operations  
[NASA-CASE-GSC-10186] c08 N71-33110

Development and characteristics of telemetry system using computer-accessed circuits and remotely controlled from ground station  
[NASA-CASE-NFC-11358] c07 N72-25172

Development and characteristics of data decoder to process convolution encoded information  
[NASA-CASE-NFC-11371] c08 N73-12177

Characteristics of digital data processor using pulse from clock source to derive binary singles to show state of various indicators in processor  
[NASA-CASE-GSC-10975-1] c08 N73-13187

Automatic accounting system for transfer of data from terminals to computer  
[NASA-CASE-NFO-11456] c08 N73-26176

Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NFC-13545-1] c32 N77-12240

High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c60 N81-27814

**DATA RECORDERS**

Description of system for recording and reading out data related to distribution of occurrence of plurality of events  
[NASA-CASE-XNP-04067] c08 N71-22707

Design and characteristics of recording system for selective reprocessing and filtering of data to obtain optimum signal to noise ratios  
[NASA-CASE-ERC-10112] c07 N72-21119

Recorder/processor apparatus --- for optical data processing  
[NASA-CASE-GSC-11553-1] c35 N74-15831

**DATA RECORDING**

System for recording and reproducing PCM data from data stored on magnetic tape  
[NASA-CASE-XGS-01021] c08 N71-21042

Description of system for recording and reading out data related to distribution of occurrence of plurality of events  
[NASA-CASE-XNP-04067] c08 N71-22707

Development of data storage system for storing digital data in high density format on magnetic tape  
[NASA-CASE-XNP-02778] c08 N71-22710

Transient video signal tape recorder with expanded playback  
[NASA-CASE-ARC-10003-1] c09 N71-25866

Apparatus for on-film optical recording of camera lens aperture and focus setting  
[NASA-CASE-MSC-12363-1] c14 N73-26431

Image data rate converter having a drum with a fixed head and a rotatable head  
[NASA-CASE-NPO-11659-1] c35 N74-11283

Holography utilizing surface plasmon resonances  
[NASA-CASE-MPS-22040-1] c35 N74-26946

**DATA REDUCTION**

System for storing histogram data in optimum number of elements



[NASA-CASE-XNP-09785] c08 N69-21928  
 Respiration analyzing method and apparatus for  
 determining subjects oxygen consumption in  
 aerospace environments  
 [NASA-CASE-XFR-08403] c05 N71-11202  
 Minimum time delay unit for conventional time  
 multiplexed data compression channels  
 [NASA-CASE-XNP-08832] c08 N71-12506  
 Data compression processor for monitoring analog  
 signals by sampling procedure  
 [NASA-CASE-NPO-10068] c08 N71-19288  
 Wide range analog data compression system  
 [NASA-CASE-XGS-02612] c08 N71-19435  
 Description of system for recording and reading  
 out data related to distribution of occurrence  
 of plurality of events  
 [NASA-CASE-XNP-04067] c08 N71-22707  
 Apparatus with summing network for compression  
 of analog data by decreasing slope threshold  
 sampling  
 [NASA-CASE-NPO-10769] c08 N72-11171  
 Data reduction and transmission system for TV  
 PCM data  
 [NASA-CASE-NFO-11243] c07 N72-20154  
 Data compression using decreasing slope  
 threshold test and digital techniques  
 [NASA-CASE-NFO-11630] c08 N72-33172

**DATA RETRIEVAL**  
 Magnetic matrix memory system for nondestructive  
 reading of information contained in matrix  
 [NASA-CASE-XMF-05835] c08 N71-12504  
 Asynchronous, multiplexing, single line  
 transmission and recovery data system --- for  
 satellite use  
 [NASA-CASE-NPO-13321-1] c32 N75-26195

**DATA SAMPLING**  
 Monitoring circuit design for sampling circuit  
 control and reduction of time-bandwidth in  
 video communication systems  
 [NASA-CASE-XNP-02791] c07 N71-23026  
 Sampling circuit for signal processing in  
 multiplex transmission by Fourier analysis  
 [NASA-CASE-NPO-10388] c07 N71-24622  
 Video signal processing system for sampling  
 video brightness levels  
 [NASA-CASE-NPO-10140] c07 N71-24742  
 Apparatus with summing network for compression  
 of analog data by decreasing slope threshold  
 sampling  
 [NASA-CASE-NPO-10769] c08 N72-11171  
 Sampling video compression system  
 [NASA-CASE-ARC-10984-1] c32 N77-24328  
 CCD correlated quadruple sampling processor  
 [NASA-CASE-NPO-14426-1] c33 N81-27396

**DATA SMOOTHING**  
 Variable time constant, wide frequency range  
 smoothing network for noise removal from pulse  
 chains  
 [NASA-CASE-XGS-01983] c10 N70-41964

**DATA STORAGE**  
 Data handling based on source significance,  
 storage availability, and data received from  
 source  
 [NASA-CASE-XNP-04162-1] c08 N70-34675  
 Magnetic matrix memory system for nondestructive  
 reading of information contained in matrix  
 [NASA-CASE-XMF-05835] c08 N71-12504  
 Tape guidance system for multichannel digital  
 recording system  
 [NASA-CASE-XNP-09453] c08 N71-19420  
 Event recorder with constant speed motor which  
 rotates recording disk  
 [NASA-CASE-XLA-01832] c14 N71-21006  
 System for recording and reproducing PCM data  
 from data stored on magnetic tape  
 [NASA-CASE-XGS-01021] c08 N71-21042  
 Development of data storage system for storing  
 digital data in high density format on  
 magnetic tape  
 [NASA-CASE-XNP-02778] c08 N71-22710  
 Multiple pattern holographic information storage  
 and readout system  
 [NASA-CASE-ERC-10151] c16 N71-29131  
 Momentum wheel design for spacecraft attitude  
 control and magnetic drum and head system for  
 data storage  
 [NASA-CASE-NPO-11481] c21 N73-13644  
 Data storage, image tube type  
 [NASA-CASE-MSC-14053-1] c60 N74-12888

Lightning current waveform measuring system  
 [NASA-CASE-KSC-11018-1] c33 N79-10337

**DATA SYSTEMS**  
 Data handling based on source significance,  
 storage availability, and data received from  
 source  
 [NASA-CASE-XNP-04162-1] c08 N70-34675  
 Development and characteristics of rate  
 augmented digital to analog converter for  
 computed time-dependent data  
 [NASA-CASE-XLA-07828] c08 N71-27057  
 Method and apparatus for decoding compatible  
 convolutional codes  
 [NASA-CASE-MSC-14070-1] c32 N74-32598

**DATA TRANSMISSION**  
 Telemetry data unit to form multibit words for  
 use between demodulator and computer  
 [NASA-CASE-XNP-09225] c09 N69-24333  
 Phase shift data transmission system with  
 pseudo-noise synchronization code modulated  
 with digital data into single channel for  
 spacecraft communication  
 [NASA-CASE-XNP-00911] c08 N70-41961  
 Minimum time delay unit for conventional time  
 multiplexed data compression channels  
 [NASA-CASE-XNP-08832] c08 N71-12506  
 Data compression processor for monitoring analog  
 signals by sampling procedure  
 [NASA-CASE-NPO-10068] c08 N71-19288  
 Wide range analog data compression system  
 [NASA-CASE-XGS-02612] c08 N71-19435  
 Plural channel data transmission system with  
 quadrature modulation and complementary  
 demodulation  
 [NASA-CASE-XAC-06302] c08 N71-19763  
 Monitoring circuit design for sampling circuit  
 control and reduction of time-bandwidth in  
 video communication systems  
 [NASA-CASE-XNP-02791] c07 N71-23026  
 Frequency shift keying apparatus for use with  
 pulse code modulation data transmission system  
 [NASA-CASE-XGS-01537] c07 N71-23405  
 Binary data decoding device for use at receiving  
 end of communication channel  
 [NASA-CASE-NFC-10118] c07 N71-24741  
 Data reduction and transmission system for TV  
 PCM data  
 [NASA-CASE-NPO-11243] c07 N72-20154  
 Characteristics of two channel telemetry system  
 with two data rate channels for high and low  
 data rate communication  
 [NASA-CASE-NPC-11572] c07 N73-16121  
 Automatic accounting system for transfer of data  
 from terminals to computer  
 [NASA-CASE-NFC-11456] c08 N73-26176  
 System for generating timing and control signals  
 [NASA-CASE-NPO-13125-1] c33 N75-19519  
 Sampling video compression system  
 [NASA-CASE-ARC-10984-1] c32 N77-24328  
 Pseudo noise code and data transmission method  
 and apparatus  
 [NASA-CASE-GSC-12017-1] c32 N77-30308  
 Multi-channel rotating optical interface for  
 data transmission  
 [NASA-CASE-NFC-14066-1] c74 N79-34011  
 System for displaying at a remote station data  
 generated at a central station and for  
 powering the remote station from the central  
 station  
 [NASA-CASE-GSC-12411-1] c33 N81-14221

**DAWSONITE**  
 Synthesis of dawsonites  
 [NASA-CASE-ARC-113261-1] c25 N80-31490

**DEBRIS**  
 Counter pumping debris excluder and separator  
 --- gas turbine shaft seals  
 [NASA-CASE-LEW-11855-1] c07 N78-25090

**DECAY RATES**  
 Solar sensor with coarse and fine sensing  
 elements for matching preirradiated cells on  
 degradation rates  
 [NASA-CASE-XLA-01584] c14 N71-23269

**DECELERATION**  
 Assembly for opening flight capsule stabilizing  
 and decelerating flaps with reference to  
 capsule recovery  
 [NASA-CASE-XMF-00641] c31 N70-36410  
 Device for use in descending spacecraft as  
 altitude sensor for actuating deceleration

- retro-rockets  
[NASA-CASE-XMS-03792] c14 N70-41812
- Development and characteristics of hot air  
balloon deceleration and recovery system  
[NASA-CASE-XIA-06824-2] c02 N71-11037
- Zero gravity apparatus utilizing pneumatic  
decelerating means to create payload subjected  
to zero gravity conditions by dropping its  
height  
[NASA-CASE-XMF-06515] c14 N71-23227
- DECIMALS**  
Digital converter for scaling binary number to  
binary coded decimal number of higher multiple  
[NASA-CASE-KSC-10595] c08 N73-12176
- DECISION MAKING**  
Method and apparatus for decoding compatible  
convolutional codes  
[NASA-CASE-MSC-14070-1] c32 N74-32598
- DECODERS**  
Serial digital decoder design with square  
circuit matrix and serial memory storage units  
[NASA-CASE-NPO-10150] c08 N71-24650
- Binary to decimal decoder logic circuit design  
with feedback control and display device  
[NASA-CASE-XKS-06167] c08 N71-24890
- Design and development of encoder/decoder system  
to generate binary code which is function of  
outputs of plurality of bistable elements  
[NASA-CASE-NPO-10342] c10 N71-33407
- Compact bi-phase pulse coded modulation decoder  
[NASA-CASE-KSC-10834-1] c33 N76-14371
- Low distortion receiver for bi-level baseband  
PCM waveforms  
[NASA-CASE-MSC-14557-1] c32 N76-16249
- Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c33 N77-26386
- Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c32 N79-28383
- Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c33 N81-26359
- DECODING**  
Binary data decoding device for use at receiving  
end of communication channel  
[NASA-CASE-NPO-10118] c07 N71-24741
- Development and characteristics of data decoder  
to process convolutional encoded information  
[NASA-CASE-NPO-11371] c08 N73-12177
- Method and apparatus for decoding compatible  
convolutional codes  
[NASA-CASE-MSC-14070-1] c32 N74-32598
- Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c32 N77-12239
- DECOMMUTATORS**  
Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-1] c60 N80-21587
- Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c33 N81-26359
- DECONTAMINATION**  
Decontamination of petroleum products with honey  
[NASA-CASE-XNP-03835] c06 N71-23499
- Heat exchanger and decontamination system for  
multistage refrigeration unit  
[NASA-CASE-NPO-10634] c23 N72-25619
- Plasma cleaning device --- designed for high  
vacuum environments  
[NASA-CASE-MFS-22906-1] c75 N78-27913
- DEEP SPACE NETWORK**  
Low phase noise frequency divider for use with  
deep space network communication system  
[NASA-CASE-NPO-11569] c10 N73-26229
- DEFECTS**  
Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c38 N78-32447
- DEFLECTION**  
Bipropellant injector with pair of concave  
deflector plates  
[NASA-CASE-XNP-09461] c28 N72-23809
- Noncontacting method for measuring angular  
deflection  
[NASA-CASE-LAR-12178-1] c74 N80-21138
- DEFLECTORS**  
Deflector for preventing objects from entering  
nacelle inlets of jet aircraft  
[NASA-CASE-XLF-00388] c28 N70-34788
- Aircraft wheel spray drag alleviator for dual  
tandem landing gear  
[NASA-CASE-XLA-01583] c02 N70-36825
- Ion beam deflector system for electric thrust  
vector control for ion propulsion yaw, pitch,  
and roll forces  
[NASA-CASE-LEW-10689-1] c28 N71-26173
- Exhaust flow deflector --- for ducted gas flow  
[NASA-CASE-LAR-11570-1] c34 N76-18364
- Safety shield for vacuum/pressure chamber  
viewing port  
[NASA-CASE-GSC-12513-1] c31 N81-19343
- DEFOCUSING**  
Optical retrodirective modulator with focus  
spoiling reflector driven by modulation signal  
[NASA-CASE-GSC-10062] c14 N71-15605
- DEFORMATION**  
Deformation measuring apparatus with feedback  
control for arbitrarily shaped structures  
[NASA-CASE-LAR-10098] c32 N71-26681
- Development of device for simulating cyclic  
thermal loading of flexible materials by  
application of mechanical stresses and  
deformations  
[NASA-CASE-LAR-10270-1] c32 N72-25877
- Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c37 N77-32500
- DEGREES OF FREEDOM**  
Attitude control training device for astronauts  
permitting friction-free movement with five  
degrees of freedom  
[NASA-CASE-XMS-02977] c11 N71-10746
- Tuned damped vibration absorber for mass  
vibrating in more than one degree of freedom  
for use with wind tunnel models  
[NASA-CASE-LAR-10083-1] c15 N71-27006
- Kinesthetic control simulator --- for pilot  
training  
[NASA-CASE-LAR-10276-1] c09 N75-15662
- DEHUMIDIFICATION**  
Condenser-separator for dehumidifying air  
utilizing sintered metal surface  
[NASA-CASE-XLA-08645] c15 N69-21465
- DEHYDRATED FOOD**  
Rice preparation process consisting of cooking,  
two freezing-thawing cycles, and then freeze  
drying  
[NASA-CASE-MSC-13540-1] c05 N72-33096
- DELAY CIRCUITS**  
Development of pulsed differential comparator  
circuit  
[NASA-CASE-XLE-03804] c10 N71-19471
- Pulse duration control device for driving slow  
response time loads in selected sequence  
including switching and delay circuits and  
magnetic storage  
[NASA-CASE-XGS-04224] c10 N71-26418
- Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c17 N76-22245
- Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c33 N78-25319
- Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c32 N81-15179
- Combinational logic for generating gate drive  
signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c33 N81-27402
- DELAY LINES**  
Development and characteristics of solid state  
acoustic variable time delay line using direct  
current voltage and radio frequency pulses  
[NASA-CASE-ERC-10032] c10 N71-25900
- DELTA MODULATION**  
Multifunction audio digitizer --- producing  
direct delta and pulse code modulation  
[NASA-CASE-MSC-13855-1] c35 N74-17885
- DELTA WINGS**  
Delta winged, manned reentry vehicle capable of  
horizontal glide landing at low speeds  
[NASA-CASE-XLA-00241] c31 N70-37986
- DEMAGNETIZATION**  
Tumbling motion system for object demagnetization  
[NASA-CASE-XGS-02437] c15 N69-21472
- DEMODULATION**  
Plural channel data transmission system with  
quadrature modulation and complementary  
demodulation  
[NASA-CASE-XAC-06302] c08 N71-19763
- Restoration and improvement of demodulated  
facsimile video signals  
[NASA-CASE-GSC-10185-1] c07 N72-12081
- Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c33 N78-32338
- DEMODULATORS**  
Telemetry data unit to form multibit words for

- use between demodulator and computer  
[NASA-CASE-XNP-09225] c09 N69-24333
- Frequency shift keyed demodulator - circuit diagrams  
[NASA-CASE-XGS-02889] c07 N71-11282
- Demodulator for simultaneous demodulation of two modulating ac signal carriers close in frequency  
[NASA-CASE-XMF-01160] c07 N71-11298
- Development of demodulation system for removing amplitude modulation from two quadrature displaced data bearing signals  
[NASA-CASE-XAC-04030] c10 N71-19472
- Calibrator for measuring and modulating or demodulating laser outputs  
[NASA-CASE-XLA-03410] c16 N71-25914
- Threshold extension device for improving operating performance of frequency modulation demodulators by eliminating click-type noise impulses  
[NASA-CASE-MS-C-12165-1] c07 N71-33696
- Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c33 N74-14939
- Unbalanced quadruphase demodulator  
[NASA-CASE-MS-C-14840-1] c32 N77-24331
- Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c32 N79-14267
- Digital demodulator  
[NASA-CASE-LAR-12659-1] c33 N80-31731
- Self-calibrating threshold detector  
[NASA-CASE-MS-C-16370-1] c35 N81-19427
- DENSIFICATION**  
Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MS-C-18737-1] c25 N81-29180
- DENSITOMETERS**  
Capacitor for measuring density of compressible fluid in liquid, gas, or liquid and gas phases  
[NASA-CASE-XLE-00143] c14 N70-36618
- Measuring density of single and two-phase cryogenic fluids in rocket fuel tanks  
[NASA-CASE-XLE-00688] c14 N70-41330
- Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c35 N75-12271
- DENSITY (MASS/VOLUME)**  
A stable density-stratification solar pond  
[NASA-CASE-NPO-15419-1] c44 N81-27599
- DENSITY DISTRIBUTION**  
Increasing available power per unit area in ion rocket engine by increasing beam density  
[NASA-CASE-XLE-00519] c28 N70-41576
- Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector --- for determining density of gas  
[NASA-CASE-ARC-10631-1] c74 N76-20958
- DENSITY MEASUREMENT**  
Capacitor for measuring density of compressible fluid in liquid, gas, or liquid and gas phases  
[NASA-CASE-XLE-00143] c14 N70-36618
- Measuring density of single and two-phase cryogenic fluids in rocket fuel tanks  
[NASA-CASE-XLE-00688] c14 N70-41330
- Determining particle density using known material Hugoniot curves  
[NASA-CASE-LAR-11059-1] c76 N75-12810
- Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c35 N78-15461
- DENTISTRY**  
Process for preparing calcium phosphate salts for tooth repair  
[NASA-CASE-ERC-10338] c04 N72-33072
- Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c52 N81-12724
- DEOXYGENATION**  
Electrocatalyst for oxygen reduction in low temperature alkaline fuel cell  
[NASA-CASE-HQN-10537-1] c06 N72-10138
- DEPLOYMENT**  
Extendable, self-deploying boom apparatus  
[NASA-CASE-GSC-10566-1] c15 N72-18477
- Deployable cantilever support for deploying solar cell arrays aboard spacecraft and reducing transient loading  
[NASA-CASE-NPO-10883] c31 N72-22874
- Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c18 N80-14183
- DEPOSITION**  
Means and methods of depositing thin films on substrates  
[NASA-CASE-XNP-00595] c15 N70-34967
- Dual wavelength system for monitoring film deposition  
[NASA-CASE-MFS-20675] c26 N73-26751
- Production of pure metals  
[NASA-CASE-LEW-10906-1] c25 N74-30502
- DESCENT**  
Emergency descent device  
[NASA-CASE-MFS-23074-1] c54 N77-21844
- DESIGN ANALYSIS**  
Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil  
[NASA-CASE-LAR-10585-1] c02 N76-22154
- Snap-in compressible biomedical electrode  
[NASA-CASE-MS-C-14623-1] c52 N77-28717
- DESTABILIZATION**  
Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c06 N81-22048
- DESTRUCTIVE TESTS**  
Aeroelastic instability stoppers for wind-tunnel models  
[NASA-CASE-LAR-12458-1] c09 N81-31230
- DESULFURIZING**  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c44 N78-31527
- Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c31 N81-15154
- Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPC-14272-1] c25 N81-33246
- Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c28 N82-12240
- DETECTION**  
Heated element sensor for fluid flow detection in thermal conductive conduit with adaptive means to determine flow rate and direction  
[NASA-CASE-MS-C-12084-1] c12 N71-17569
- Fluid leakage detection system with automatic monitoring capability  
[NASA-CASE-LAR-10323-1] c12 N71-17573
- Metal detection system with electromagnetic transmitter with single coil and receiver with single coil  
[NASA-CASE-ARC-10265-1] c10 N72-28240
- System for detecting impact position of cosmic dust on detector surface  
[NASA-CASE-GSC-11291-1] c25 N72-33696
- Detection of bacteria in biological fluids and foods  
[NASA-CASE-GSC-11533-1] c14 N73-13435
- Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPC-11856-1] c36 N74-15145
- Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c35 N75-19612
- Method and device for destructive detection of a substance --- useful in determining the concentration of carbon fibers or pollutant particles  
[NASA-CASE-NPO-14940-1] c35 N80-21723
- Photoelectric detection system  
[NASA-CASE-MFS-23776-1] c74 N80-25134
- Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c51 N81-29727
- DETECTORS**  
Pressurized cell micrometeoroid detector  
[NASA-CASE-XLA-00936] c14 N71-14996
- Development of large area micrometeoroid impact detector panels  
[NASA-CASE-XLA-05906] c31 N71-16221
- Development of pulse-activated polarographic hydrogen detector  
[NASA-CASE-XMF-06531] c14 N71-17575
- Electro-optical detector for determining position of light source  
[NASA-CASE-XNP-01059] c23 N71-21821
- Method for locating leaks in hermetically sealed containers  
[NASA-CASE-ERC-10045] c15 N71-24910
- Precipitation detector and mechanism for stopping and restarting machinery at initiation and cessation of rain  
[NASA-CASE-XLA-02619] c10 N71-26334

- Hydrogen fire blink detector for high altitude rocket or ground installation  
[NASA-CASE-MFS-15063] c14 N72-25412
- Device for detection of combustion light preceding gaseous explosions  
[NASA-CASE-LAR-10739-1] c14 N73-16484
- Optical imaging system for increasing light absorption efficiency of imaging detector  
[NASA-CASE-ARC-10194-1] c23 N73-20741
- Cold cathode discharge tube with pressurized gas cell for meteoroid detection in space  
[NASA-CASE-LAR-10483-1] c14 N73-32327
- Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c35 N74-21062
- Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c35 N76-18403
- Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c43 N79-31706
- DETERGENTS**
- Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c23 N75-14834
- DETONATION**
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c28 N74-27425
- DETONATION WAVES**
- Detonation reaction engine comprising outer housing enclosing pair of inner walls for continuous flow  
[NASA-CASE-XMF-06926] c28 N71-22983
- DEUTERIUM**
- Gas chromatographic method for analyzing hydrogen deuterium mixtures  
[NASA-CASE-NPO-11322] c06 N72-25146
- Deuterium pass through target --- neutron emitting target  
[NASA-CASE-LEW-11866-1] c72 N76-15860
- DIAGNOSIS**
- Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c52 N79-14751
- Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c52 N81-27783
- DIAGRAMS**
- Phototransistor with base collector junction diode for integration into photo sensor arrays  
[NASA-CASE-MFS-20407] c09 N73-19235
- DIALYSIS**
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c52 N80-14687
- DIAMINES**
- Preparation of elastomeric diamine silazane polymers  
[NASA-CASE-XMF-04133] c06 N71-20717
- Synthesis of aromatic diamines and dialdehyde polymers using Schiff base  
[NASA-CASE-XMF-03074] c06 N71-24740
- Synthesis of siloxane containing epoxide and diamine polymers  
[NASA-CASE-MFS-13994-2] c06 N72-25148
- Stable polyimide synthesis from mixtures of monomeric diamines and polycarboxylic acid esters  
[NASA-CASE-LEW-11325-1] c06 N73-27980
- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c27 N79-33316
- Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c27 N81-14078
- DIAMONDS**
- Exponential horn, copper plate, magnetic hammer, and anvil in apparatus for making diamonds  
[NASA-CASE-MFS-26698] c15 N72-20446
- Simplified technique and device for producing industrial grade synthetic diamonds  
[NASA-CASE-MFS-20698-2] c15 N73-19457
- DIAPHRAGMS (MECHANICS)**
- Expulsion and measuring device for determining quantity of liquid in tank under conditions of weightlessness  
[NASA-CASE-XMS-01546] c14 N70-40233
- Reinforcing beam system for highly flexible diaphragms in valves or pressure switches  
[NASA-CASE-XNF-01962] c32 N70-41370
- Flexible rocket motor nozzle closure device to aid ignition and protect rocket chamber from foreign objects  
[NASA-CASE-XLA-02651] c28 N70-41967
- Knife structure for controlling rupture of shock tube diaphragms  
[NASA-CASE-XAC-00731] c11 N71-15960
- Magnetically opened diaphragm design with camera shutter and expansion tube applications  
[NASA-CASE-XLA-03660] c15 N71-21060
- Design and development of inertia diaphragm pressure transducer  
[NASA-CASE-XAC-02981] c14 N71-21072
- Punch and die device for forming convolution series in thin gage metal hemispheres  
[NASA-CASE-XNF-05297] c15 N71-23811
- Development of differential pressure control system using motion of mechanical diaphragms to operate electric switch  
[NASA-CASE-MFS-14216] c14 N73-13418
- DIATOMIC GASES**
- Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c36 N75-31426
- DICHROISM**
- Dichroic plate --- as bandpass filters  
[NASA-CASE-NFO-13506-1] c35 N76-15435
- Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c33 N79-28416
- DICKE RADIOMETERS**
- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c35 N80-18359
- DIELECTRIC PROPERTIES**
- Capacitive tank gaging device for monitoring one constituent of two phase fluid by sensing dielectric constant  
[NASA-CASE-MFS-21629] c14 N72-22442
- Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c35 N79-17192
- DIELECTRICS**
- Fabricating solar cells with dielectric layers to improve glass fusion  
[NASA-CASE-XGS-04531] c03 N69-24267
- Temperature sensitive capacitor device for detecting very low intensity infrared radiation  
[NASA-CASE-XNF-09750] c14 N69-39937
- Electrical power system for space flight vehicles operating over extended periods  
[NASA-CASE-XMF-00517] c03 N70-34157
- Nose cone mounted heat resistant antenna comprising plurality of adjacent layers of silica not introducing paths of high thermal conductivity through ablative shield  
[NASA-CASE-XMS-04312] c07 N71-22984
- Broadband microwave waveguide window to compensate dielectric material filling  
[NASA-CASE-XNP-08880] c09 N71-24808
- Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications  
[NASA-CASE-HCN-10541-2] c15 N71-27135
- Quasi-optical microwave circuit with dielectric body for use with oversize waveguides  
[NASA-CASE-ERC-10011] c07 N71-29065
- Semiconductor device manufacture using refractory dielectrics as diffusant masks and interconnection insulating materials  
[NASA-CASE-XEB-08476-1] c26 N72-17820
- Material compositions and processes for developing dielectric thick films used in microcircuit capacitors  
[NASA-CASE-LAR-10294-1] c26 N72-28762
- Low loss dichroic plate  
[NASA-CASE-NFC-13171-1] c32 N74-11000
- Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-MFS-22129-1] c33 N75-18477
- Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NEC-13443-1] c76 N76-20994
- Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ABC-10892-2] c27 N79-14214
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c36 N80-18372

- DIES**  
Punch and die device for forming convolution series in thin gage metal hemispheres  
[NASA-CASE-XNP-05297] c15 N71-23811  
Development and characteristics of frusto-conical die nib for extrusion of refractory metals  
[NASA-CASE-XLE-06773] c15 N71-23817  
Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c37 N81-16470
- DIESEL ENGINES**  
Diesel engine catalytic combustor system --- turbocharging  
[NASA-CASE-LEW-12995-1] c37 N80-26659
- DIETS**  
Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c52 N75-15270
- DIFFERENTIAL AMPLIFIERS**  
Temperature compensated solid state differential amplifier with application in bioinstrumentation circuits  
[NASA-CASE-XAC-00435] c09 N70-35440  
Stepping motor control apparatus exciting windings in proper time sequence to cause motor to rotate in either direction  
[NASA-CASE-GSC-10366-1] c10 N71-18772
- DIFFERENTIAL INTERFEROMETRY**  
Device for determining acceleration of gravity by interferometric measurement of travel of falling body  
[NASA-CASE-XMF-05844] c14 N71-17587
- DIFFERENTIAL PRESSURE**  
Relief valve to permit slow and fast bleeding rates at difference pressure levels  
[NASA-CASE-XMS-05894-1] c15 N69-21924  
Apparatus for ejecting covers of instrument packages using differential pressure principle  
[NASA-CASE-XMF-04132] c15 N69-27502  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c71 N78-14867  
Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c74 N78-17867  
System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c02 N80-28300
- DIFFERENTIATORS**  
Window comparator  
[NASA-CASE-FRC-10090-1] c33 N78-18308
- DIFFRACTION**  
Highly stable optical mirror assembly optimizing image quality of light diffraction patterns  
[NASA-CASE-ERC-10001] c23 N71-24868
- DIFFRACTION PATTERNS**  
Digital sensor for counting fringes produced by interferometers with improved sensitivity and one photomultiplier tube to eliminate alignment problem  
[NASA-CASE-LAR-10204] c14 N71-27215
- DIFFRACTOMETERS**  
Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c14 N73-28491
- DIFFUZE RADIATION**  
Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c74 N78-15879
- DIFFUSERS**  
Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c44 N79-11468
- DIFFUSION**  
Selective gold diffusion on monolithic silicon chips for switching and nonswitching amplifier devices and circuits and linear and digital logic circuits  
[NASA-CASE-ERC-10072] c09 N70-11148  
Metallic film diffusion for boundary lubrication in aerospace engineering  
[NASA-CASE-XLE-10337] c15 N71-24046  
Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c70 N74-13436
- DIFFUSION PUMPS**  
Oil trap for preventing diffusion pump backstreaming into evacuated system  
[NASA-CASE-GSC-10518-1] c15 N72-22489
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c52 N74-22771
- DIFFUSION WELDING**  
Method for diffusion welding dissimilar metals in vacuum chamber  
[NASA-CASE-GSC-10303] c15 N72-22487  
Reinforced FEP Teflon composite material diffusion bonded to metal substrate  
[NASA-CASE-MFS-20482] c15 N72-22492  
Two-step diffusion welding process of unrecrystallized alloys  
[NASA-CASE-LEW-11388-1] c15 N73-32358  
Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MSC-14435-1] c37 N76-18455
- DIGITAL COMMAND SYSTEMS**  
Digitally controlled frequency synthesizer for pulse frequency modulation telemetry systems  
[NASA-CASE-XGS-02317] c09 N71-23525  
System for maintaining motor at predetermined speed using digital pulses  
[NASA-CASE-XMF-06892] c09 N71-24805  
Digital filter for reducing jitter in digital control systems  
[NASA-CASE-NPO-11088] c08 N71-29034
- DIGITAL COMPUTERS**  
Device for removing plastic dust cover from digital computer disk packs for inspection and cleaning  
[NASA-CASE-LAR-10590-1] c15 N70-26819  
Binary number sorter for arranging numbers in order of magnitude  
[NASA-CASE-NPO-10112] c08 N71-12502  
Binary sequence detector with few memory elements and minimized logic circuit complexity  
[NASA-CASE-XNP-05415] c08 N71-12505  
Digital computer system for automatic prelaunch checkout of spacecraft  
[NASA-CASE-XKS-08012-2] c31 N71-15566  
Description of error correcting methods for use with digital data computers and apparatus for encoding and decoding digital data  
[NASA-CASE-XNP-02748] c08 N71-22749  
Serial digital decoder design with square circuit matrix and serial memory storage units  
[NASA-CASE-NFC-10150] c08 N71-24650  
Digital magnetic core memory with sensing amplifier circuits  
[NASA-CASE-XNP-01012] c08 N71-28925  
Redundant memory for enhanced reliability of digital data processing system  
[NASA-CASE-GSC-10564] c10 N71-29135  
Digital converter for scaling binary number to binary coded decimal number of higher multiple  
[NASA-CASE-KSC-10595] c08 N73-12176  
Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c35 N75-30504  
Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c60 N77-14751  
Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c60 N78-10709
- DIGITAL DATA**  
Phase shift data transmission system with pseudo-noise synchronization code modulated with digital data into single channel for spacecraft communication  
[NASA-CASE-XNP-00911] c08 N70-41961  
Tape guidance system for multichannel digital recording system  
[NASA-CASE-XNP-09453] c08 N71-19420  
Digital telemetry system apparatus to reduce tape recorder wow and flutter noise during playback  
[NASA-CASE-XGS-01812] c07 N71-23001  
Digital data handling circuits for pulse amplifiers  
[NASA-CASE-XNP-01068] c10 N71-28739  
Bit synchronization system using digital data transition tracking phased locked loop  
[NASA-CASE-NPO-10844] c07 N72-20140  
Control and information system for digital telemetry data using analog converter to digitize sensed parameter values  
[NASA-CASE-NPO-11016] c08 N72-31226  
Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c62 N76-31946

- Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c60 N79-20751
- DIGITAL FILTERS**
- Design and development of signal detection and tracking apparatus  
[NASA-CASE-XGS-03502] c10 N71-20852
- Digital filter for reducing jitter in digital control systems  
[NASA-CASE-NPO-11088] c08 N71-29034
- Nonrecursive counting digital filter containing shift register  
[NASA-CASE-NPO-11821-1] c08 N73-26175
- Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c32 N76-21366
- DIGITAL INTEGRATORS**
- Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c33 N79-22373
- DIGITAL RADAR SYSTEMS**
- Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c32 N82-12297
- DIGITAL SPACECRAFT TELEVISION**
- TV camera output signal control system for digital spacecraft communication  
[NASA-CASE-XNP-01472] c14 N70-41807
- DIGITAL SYSTEMS**
- Light sensitive digital aspect sensor for attitude control of earth satellites or space probes  
[NASA-CASE-XGS-00359] c14 N70-34158
- Circuit diagram and operation of full binary adder  
[NASA-CASE-XGS-00689] c08 N70-34787
- Digital telemetry system apparatus to reduce tape recorder wow and flutter noise during playback  
[NASA-CASE-XGS-01812] c07 N71-23001
- Reliable magnetic core circuit apparatus with application in selection matrices for digital memories  
[NASA-CASE-XNP-01518] c10 N71-23033
- Noninterruptable digital counter circuit design with display device for pulse frequency modulation  
[NASA-CASE-XNP-05759] c08 N71-24891
- Digital memory system with multiple switch cores for driving each word location  
[NASA-CASE-XNP-01466] c10 N71-26434
- Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c08 N72-20176
- Digital function generator for generating any arbitrary single valued function  
[NASA-CASE-NPO-11104] c08 N72-22165
- Digital video system for displaying image and alphanumeric data on cathode ray tube  
[NASA-CASE-NPO-11342] c09 N72-25248
- Data compression using decreasing slope threshold test and digital techniques  
[NASA-CASE-NPO-11630] c08 N72-33172
- Characteristics of digital data processor using pulse from clock source to derive binary singles to show state of various indicators in processor  
[NASA-CASE-GSC-10975-1] c08 N73-13187
- Low phase noise frequency divider for use with deep space network communication system  
[NASA-CASE-NFO-11569] c10 N73-26229
- Synchronized digital communication system  
[NASA-CASE-XNP-03623] c09 N73-28084
- Digital second-order phase-locked loop  
[NASA-CASE-NFO-11905-1] c33 N74-12887
- Digital controller for a Baum folding machine --- providing automatic counting and machine shutoff  
[NASA-CASE-LAR-10688-1] c37 N74-21056
- Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c32 N75-21486
- Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c33 N76-18353
- Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c32 N77-10392
- Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c32 N77-20289
- Open loop digital frequency multiplier  
[NASA-CASE-MSC-12709-1] c33 N77-24375
- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c32 N79-10263
- Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c33 N79-11313
- Digital demodulator-correlator  
[NASA-CASE-NPC-13982-1] c32 N79-14267
- DIGITAL TECHNIQUES**
- Describing frequency discriminator using digital logic circuits and supplying single binary output signal  
[NASA-CASE-MFS-14322] c08 N71-18692
- Constructing Exclusive-Or digital logic circuit in single module  
[NASA-CASE-XLA-07732] c08 N71-18751
- Horizon sensor design with digital sampling of spaced radiation-compensated thermopile infrared detectors  
[NASA-CASE-XNP-06957] c14 N71-21088
- Digital cardiometer incorporating circuit for measuring heartbeat rate of subject over predetermined portion of one minute also converting rate to beats per minute  
[NASA-CASE-XMS-02399] c05 N71-22896
- Digital synchronizer for extracting binary data in receiver of PSK/PCM communication system  
[NASA-CASE-NPO-10851] c07 N71-24613
- Digital sensor for counting fringes produced by interferometers with improved sensitivity and one photomultiplier tube to eliminate alignment problem  
[NASA-CASE-LAR-10204] c14 N71-27215
- Apparatus and digital technique for coding rate data  
[NASA-CASE-LAR-10128-1] c08 N73-20217
- Digital communication system  
[NASA-CASE-MSC-13912-1] c32 N74-30524
- Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c33 N75-25040
- Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c33 N81-17349
- DIGITAL TO ANALOG CONVERTERS**
- Development and characteristics of rate augmented digital to analog converter for computed time-dependent data  
[NASA-CASE-XLA-07828] c08 N71-27057
- Digital to analog converter with parallel input/output memory device  
[NASA-CASE-KSC-10397] c08 N72-25206
- Digital to analog converter for sampled signal reconstruction  
[NASA-CASE-MSC-12458-1] c08 N73-32081
- DIGITAL TRANSDUCERS**
- Digital to analog converter for sampled signal reconstruction  
[NASA-CASE-MSC-12458-1] c08 N73-32081
- Angle detector  
[NASA-CASE-ARC-11036-1] c35 N78-32395
- DIISOCYANATES**
- Chemical and physical properties of synthetic polyurethane polymer prepared by reacting hydroxy carbonate with organic diisocyanate  
[NASA-CASE-MFS-10512] c06 N73-30099
- Preparation of stable polyurethane polymer by reacting polymer with diisocyanate  
[NASA-CASE-MFS-10506] c06 N73-30100
- Preparation of polyurethane polymer by reacting hydroxy polyformal with organic diisocyanate  
[NASA-CASE-MFS-10509] c06 N73-30103
- DIMENSIONS**
- Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c35 N78-17357
- DIODES**
- Single electrical circuit component combining diode, fuse, and blown indicator with elongated tube of heat resistant transparent material  
[NASA-CASE-XKS-03381] c09 N71-22796
- Maintaining current flow through solar cells with open connection using shunting diode  
[NASA-CASE-XLI-04535] c03 N71-23354
- Gunn effect microwave diodes with RF shielding  
[NASA-CASE-ERC-10119] c26 N72-21701
- Transistorized switching logic circuits with tunnel diodes  
[NASA-CASE-GSC-10878-1] c10 N72-22236

- Development of method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c15 N72-25457
- Development of temperature compensated light source with components and circuitry for maintaining luminous intensity independent of temperature variations  
[NASA-CASE-ARC-10467-1] c09 N73-14214
- Silicon carbide backward diode with coated lead attachment  
[NASA-CASE-ERC-10224-2] c09 N73-27150
- High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c33 N74-22814
- Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c33 N78-32339
- Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c33 N78-32341
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c31 N79-17029
- DIPLOLE ANTENNAS**
- Circularly polarized antenna with linearly polarized pair of elements  
[NASA-CASE-ERC-10214] c09 N72-31235
- Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-16606-1] c32 N82-11336
- DIRECT CURRENT**
- Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c03 N69-21330
- Automatic control of voltage supply to direct current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39987
- Thermionic diode switch for use in high temperature region to chop current from dc source  
[NASA-CASE-NPO-10404] c03 N71-12255
- Transistorized dc-coupled multivibrator with noninverted output signal  
[NASA-CASE-XNP-09450] c10 N71-18723
- Stepping motor control apparatus exciting windings in proper time sequence to cause motor to rotate in either direction  
[NASA-CASE-GSC-10366-1] c10 N71-18772
- Frequency control network for current feedback oscillators converting dc voltage to ac or higher dc voltages  
[NASA-CASE-GSC-10041-1] c10 N71-19418
- Direct current powered self repeating plasma accelerator with interconnected annular and linear discharge channels  
[NASA-CASE-XLA-03103] c25 N71-21693
- Conversion of positive dc voltage to positive dc voltage of lower amplitude  
[NASA-CASE-XMF-14301] c09 N71-23188
- Converting output of positive dc voltage source to negative dc voltage across load with common reference point  
[NASA-CASE-XMF-08217] c03 N71-23239
- Blood pressure measuring system for separately recording dc and ac pressure signals of Korotkoff sounds  
[NASA-CASE-XMS-06061] c05 N71-23317
- Radio frequency coaxial filter to provide dc isolation and low frequency signal rejection in audio range  
[NASA-CASE-XGS-01418] c09 N71-23573
- Brushless dc tachometer design with Hall effect crystals and output voltage magnitude proportional to rotor speed  
[NASA-CASE-MFS-20385] c09 N71-24904
- Inverters for changing direct current to alternating current  
[NASA-CASE-XGS-06226] c10 N71-25950
- Circuits for controlling reversible dc motor  
[NASA-CASE-XNP-07477] c09 N71-26092
- Feedback control for direct current motor to achieve constant speed under varying loads  
[NASA-CASE-MFS-14610] c09 N71-28886
- High dc switch for causing abrupt, cyclic, decreases of current to operate under zero or varying gravity conditions  
[NASA-CASE-LEW-10155-1] c09 N71-29035
- Power converters for supplying direct current at one voltage from source at another voltage  
[NASA-CASE-XER-11046] c09 N72-22203
- Dc to ac to dc converter with transistor driven synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c09 N72-25253
- Direct current motor including stationary field windings and stationary armature winding  
[NASA-CASE-XGS-07805] c15 N72-33476
- Powerplexer for distribution of dc power levels to loads which require different voltages  
[NASA-CASE-MSC-12396-1] c03 N73-31988
- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c33 N74-21851
- Load insensitive electrical device --- power converters for supplying direct current at one voltage from a source at another voltage  
[NASA-CASE-XER-11046-2] c33 N74-22864
- Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c32 N77-12239
- Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c33 N77-26386
- Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c33 N79-10338
- Direct current transformer  
[NASA-CASE-MFS-23659-1] c33 N79-17133
- Elimination of current spikes in buck power converters  
[NASA-CASE-NFO-14505-1] c33 N81-19393
- Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NFO-13970-1] c33 N81-20352
- DIRECT LIFT CONTROLS**
- Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c08 N81-24106
- DIRECT POWER GENERATORS**
- Direct conversion of thermal energy into electrical energy using crossed electric and magnetic fields  
[NASA-CASE-XLF-00212] c03 N70-34134
- Thermal pump-compressor for converting solar energy  
[NASA-CASE-XLA-00377] c33 N71-17610
- Converting output of positive dc voltage source to negative dc voltage across load with common reference point  
[NASA-CASE-XMF-08217] c03 N71-23239
- Unsaturating magnetic core transformer design with warning signal for electrical power processing equipment  
[NASA-CASE-ERC-10125] c09 N71-24893
- Load insensitive electrical device --- power converters for supplying direct current at one voltage from a source at another voltage  
[NASA-CASE-XER-11046-2] c33 N74-22864
- DIRECTIONAL ANTENNAS**
- Mechanical coordinate converter for use with spacecraft tracking antennas  
[NASA-CASE-XNP-00614] c14 N70-36907
- Weatherproof helix antenna  
[NASA-CASE-XKS-08485] c07 N71-19493
- Tracking antenna system with array for synchronous satellite or ground based radar  
[NASA-CASE-GSC-10553-1] c07 N71-19854
- Drive system for parabolic tracking antenna with reversible motion and minimal backlash  
[NASA-CASE-NPO-10173] c15 N71-24696
- Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c32 N76-18295
- DIRECTIONAL CONTROL**
- Gimbaled partially submerged nozzle for solid propellant rocket engines for providing directional control  
[NASA-CASE-XMF-01544] c28 N70-34162
- Omnidirectional wheel  
[NASA-CASE-MFS-21309-1] c37 N74-18125
- Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c08 N81-24106
- DIRECTIONAL SOLIDIFICATION (CRYSTALS)**
- Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c26 N80-23419
- DIRECTIONAL STABILITY**
- Nose gear steering system for vehicles with main skids to provide directional stability after loss of aerodynamic control



[NASA-CASE-XLA-01804] c02 N70-34160  
System for imposing directional stability on a  
rocket-propelled vehicle  
[NASA-CASE-MFS-21511-1] c20 N76-21275

**DIRECTIVITY**  
Multiprism collimator  
[NASA-CASE-GSC-12608-1] c35 N81-12387

**DISCONNECT DEVICES**  
Patent data on gas actuated bolt disconnect  
assembly  
[NASA-CASE-XLA-00326] c03 N70-34667  
Remotely actuated quick disconnect mechanism for  
umbilical cables  
[NASA-CASE-XLA-00711] c03 N71-12258  
Remotely actuated quick disconnect for tubular  
umbilical conduits used to transfer fluids  
from ground to rocket vehicle  
[NASA-CASE-XLA-01396] c03 N71-12259  
Design and development of quick release connector  
[NASA-CASE-XLA-01141] c15 N71-13789  
Split nut and bolt separation device  
[NASA-CASE-XNP-06914] c15 N71-21489  
Electrical circuit selection device for  
simulating stage separation of flight vehicle  
[NASA-CASE-XKS-04631] c10 N71-23663  
Quick disconnect duct coupling device for  
single-handed operation  
[NASA-CASE-MFS-20395] c15 N71-24903  
Breakaway multiwire electrical cable connector  
with particular application for umbilical type  
cables  
[NASA-CASE-NPO-11140] c15 N72-17455  
Torsional disconnect device for releasably  
coupling distal ends of fluid conduits  
[NASA-CASE-NPO-10704] c15 N72-20445  
Frangible connecting link suitable for rocket  
stage separation  
[NASA-CASE-MSC-11849-1] c15 N72-22488  
Gas operated quick disconnect coupling for  
umbilical connectors  
[NASA-CASE-NPO-11202] c15 N72-25450  
Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c37 N76-14463  
Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c37 N79-11402

**DISCONTINUITY**  
Servocontrol system for measuring local stresses  
at geometric discontinuity in stressed material  
[NASA-CASE-XLA-04530] c32 N71-25360

**DISCRIMINATORS**  
Detector assembly for discriminating first  
signal with respect to presence or absence of  
second signal at time of occurrence of first  
signal  
[NASA-CASE-XMF-00701] c09 N70-40272  
Difference indicating circuit used in  
conjunction with device measuring  
gravitational fields  
[NASA-CASE-XNP-06274] c10 N71-13537  
Describing frequency discriminator using digital  
logic circuits and supplying single binary  
output signal  
[NASA-CASE-MFS-14322] c08 N71-18692  
Characteristics of comparator circuits for  
comparison of binary numbers in information  
processing system  
[NASA-CASE-XNP-04819] c08 N71-23295  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c33 N75-19520  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c33 N75-25041  
Discriminator aided phase lock acquisition for  
suppressed carrier signals  
[NASA-CASE-NFO-14311-1] c32 N79-14276

**DISPENSERS**  
Liquid aerosol dispenser with explosively driven  
piston to compress light gas to extremely high  
pressure  
[NASA-CASE-MFS-20829] c12 N72-21310  
Potable water dispenser  
[NASA-CASE-MFS-21115-1] c54 N74-12779  
Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c37 N74-13178  
Metering gun for dispensing precisely measured  
charges of fluid  
[NASA-CASE-MFS-21163-1] c54 N74-17853  
Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c35 N78-19466

**DISPERSING**  
Apparatus for mechanically dispersing ultrafine  
metal powders subjected to shock waves  
[NASA-CASE-XLF-04946] c17 N71-24911

**DISPERSIONS**  
Method for producing alkali metal dispersions of  
high purity  
[NASA-CASE-XNF-18876] c17 N73-28573

**DISPLACEMENT**  
Bimetallic fluid displacement apparatus --- for  
stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c35 N74-15126

**DISPLACEMENT MEASUREMENT**  
Null-type vacuum microbalance for measuring  
minute mechanical displacements  
[NASA-CASE-XAC-00472] c15 N70-40180  
Development and characteristics of self-  
calibrating displacement transducer for  
measuring magnitude and frequency of  
displacement of bodies  
[NASA-CASE-XLA-00781] c09 N71-22999  
Gas bearing for model support with capacity for  
measuring angular displacement of model in  
bearing  
[NASA-CASE-XLA-09346] c15 N71-28740  
Method and apparatus for remote measurement of  
displacement of marks on specimen undergoing  
tensile test  
[NASA-CASE-NPO-10778] c14 N72-11364  
Miniature muscle displacement transducer  
[NASA-CASE-NFO-13519-1] c33 N76-19338  
Simultaneous muscle force and displacement  
transducer  
[NASA-CASE-NPO-14212-1] c52 N80-27072

**DISPLAY DEVICES**  
Integrated time shared instrumentation display  
for aerospace vehicle simulators  
[NASA-CASE-XLA-01952] c08 N71-12507  
Data processing and display system for terminal  
guidance of X-15 aircraft  
[NASA-CASE-XFB-00756] c02 N71-13421  
Fluidic-thermochromic display device  
[NASA-CASE-ERC-10031] c12 N71-18603  
Cathode ray tube system for displaying ones and  
zeros in binary wave train  
[NASA-CASE-XGS-04987] c08 N71-20571  
Optical projector system for establishing  
optimum arrangement of instrument displays in  
aircraft, spacecraft, other vehicles, and  
industrial instrument consoles  
[NASA-CASE-XNP-03853] c23 N71-21882  
Optical monitor panel consisting of translucent  
screen with test or meter information  
projected onto it from rear for application in  
control rooms of missile launching and  
tracking stations  
[NASA-CASE-XKS-03509] c14 N71-23175  
Binary to decimal decoder logic circuit design  
with feedback control and display device  
[NASA-CASE-XKS-06167] c08 N71-24890  
Noninterruptable digital counter circuit design  
with display device for pulse frequency  
modulation  
[NASA-CASE-XNP-09759] c08 N71-24891  
Data acquisition system for converting displayed  
analog signal to digital values  
[NASA-CASE-NPO-10344] c10 N71-26544  
Plasma-fluidic hybrid display system combining  
high brightness and memory characteristics  
[NASA-CASE-ERC-10100] c09 N71-33519  
System for digitizing graphic displays  
[NASA-CASE-NFO-10745] c08 N72-22164  
Digital video system for displaying image and  
alphanumeric data on cathode ray tube  
[NASA-CASE-NPO-11342] c09 N72-25248  
Development of apparatus for mounting scientific  
experiments in spacecraft to permit  
utilization without maneuvering spacecraft  
[NASA-CASE-MSC-12372-1] c31 N72-25842  
Situational display system of cathode ray tubes  
to assist pilot in aircraft control  
[NASA-CASE-ERC-10350] c14 N73-20474  
Transparent switchboard which permits optical  
display devices to be adapted for use in man  
machine communications  
[NASA-CASE-MSC-13746-1] c10 N73-32143  
Recorder/processor apparatus --- for optical  
data processing  
[NASA-CASE-GSC-11553-1] c35 N74-15831

- Rotating raster generator  
[NASA-CASE-FRC-10071-1] c32 N74-20813
- G-load measuring and indicator apparatus --- for aircraft  
[NASA-CASE-ARC-10806] c06 N74-27872
- X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c33 N75-19517
- Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c74 N77-20882
- Particle parameter analyzing system --- x-y plotter circuits and display  
[NASA-CASE-XLE-06094] c33 N78-17293
- Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c35 N78-17357
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c09 N78-18083
- Chromatically corrected virtual image display --- lens design for flight simulators  
[NASA-CASE-LAR-12251-1] c74 N79-14892
- Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c52 N79-18580
- System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c74 N79-20856
- Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c74 N80-27185
- System for a displaying at a remote station data generated at a central station and for powering the remote station from the central station  
[NASA-CASE-GSC-12411-1] c33 N81-14221
- Real-time 3D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c74 N82-10862
- System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c06 N82-16075
- DISSIPATION**  
Dissipative voltage regulator system for minimizing heat dissipation  
[NASA-CASE-GSC-10891-1] c10 N71-26626
- DISSOCIATION**  
Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c44 N77-22607
- DISSOLVING**  
Apparatus for mixing two or more liquids under zero gravity conditions  
[NASA-CASE-LAR-10195-1] c15 N73-19458
- DISTANCE MEASURING EQUIPMENT**  
Binary coded sequential acquisition ranging system for distance measurements  
[NASA-CASE-NPO-11194] c08 N72-25209
- Apparatus for determining distance to lighting strokes from single station by magnetic and electric field sensing antennas  
[NASA-CASE-KSC-10698] c07 N73-20175
- Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c37 N81-27519
- DISTILLATION EQUIPMENT**  
Utilization of solar radiation by solar still for converting salt and brackish water into potable water  
[NASA-CASE-XMS-04533] c15 N71-23086
- Purification apparatus for vaporization and fractional distillation of liquids  
[NASA-CASE-XNP-08124] c15 N71-27184
- U shaped heated tube for distillation and purification of liquid metals  
[NASA-CASE-XNP-08124-2] c06 N73-13129
- DISTRIBUTED AMPLIFIERS**  
Broadband distribution amplifier with complementary pair transistor output stages  
[NASA-CASE-NPO-10003] c10 N71-26415
- DISTRIBUTORS**  
High voltage distributor  
[NASA-CASE-GSC-11849-1] c33 N76-16332
- DIVERGENT NOZZLES**  
Jet exhaust noise suppressor  
[NASA-CASE-LEW-11286-1] c07 N74-27490
- DIVERTERS**  
Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c37 N79-33468
- DIVIDERS**  
A synchronous binary array divider  
[NASA-CASE-ERC-10180-1] c60 N74-20836
- DOCUMENT STORAGE**  
Describing device for flagging punched business cards  
[NASA-CASE-XLA-02705] c08 N71-15908
- DOORS**  
Design and specifications of emergency escape system for spacecraft structures  
[NASA-CASE-MSC-12086-1] c05 N71-12345
- Fiberglass/epoxy composite automotive door structure including a glass-reinforced intrusion strip  
[NASA-CASE-NPO-15057-1] c24 N81-19230
- DOPPLER EFFECT**  
Doppler frequency shift correction device for multiplex communication with Applications Technology Satellites  
[NASA-CASE-XGS-02749] c07 N69-39978
- Describing laser Doppler velocimeter for measuring mean velocity and turbulence of fluid flow  
[NASA-CASE-MFS-20386] c21 N71-19212
- Doppler compensated communication system for locating supersonic transport position  
[NASA-CASE-GSC-10087-4] c07 N73-20174
- Doppler shift system --- system for measuring velocities of radiating particles  
[NASA-CASE-HQN-10740-1] c72 N74-19310
- Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c32 N80-24510
- An electro-optical Doppler tracker means and method for optical correlation of synthetic aperture radar data  
[NASA-CASE-NFO-14998-1] c33 N81-15194
- DOPPLER RADAR**  
Cooperative Doppler radar system for avoiding midair collisions  
[NASA-CASE-LAR-10403] c21 N71-11766
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c32 N80-32607
- Doppler radar having phase modulation of both transmitted and reflected return signals --- rangefinding  
[NASA-CASE-MSC-18675-1] c32 N81-29312
- DOSIMETERS**  
Development of dosimeter for measuring absorbed dose of high energy ionizing radiation  
[NASA-CASE-XLA-03645] c14 N71-20430
- Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c35 N81-12388
- DRAG CHUTES**  
Deployment system for flexible wing with rigid superstructure  
[NASA-CASE-XLA-01220] c02 N70-41863
- Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators  
[NASA-CASE-LAR-10776-1] c02 N74-10034
- DRAG MEASUREMENT**  
Device for measuring drag forces in flight tests  
[NASA-CASE-XLA-00113] c14 N70-33386
- Electric analog for measuring induced drag on nonplanar airfoils  
[NASA-CASE-XLA-00755] c01 N71-13410
- Electric analog for measuring induced drag on nonplanar airfoils  
[NASA-CASE-XLA-05828] c01 N71-13411
- Impact energy absorber with decreasing absorption rate  
[NASA-CASE-XLA-01530] c14 N71-23092
- System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c02 N80-28300
- Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c06 N81-17057
- DRAG REDUCTION**  
Directed fluid stream for propeller blade loading control  
[NASA-CASE-XAC-00139] c02 N70-34856
- Aircraft wheel spray drag alleviator for dual tandem landing gear  
[NASA-CASE-XLA-01583] c02 N70-36825

Improved method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-1] c37 N80-26660

Improved low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c85 N80-33312

Leading edge vortex flaps for drag reduction --- during subsonic flight  
[NASA-CASE-LAR-12750-1] c02 N81-19016

**DRIFT (INSTRUMENTATION)**

Automatic measuring and recording of gain and zero drift characteristics of electronic amplifier  
[NASA-CASE-XMS-05562-1] c09 N69-39986

Solar radiation direction detector and device for compensating degradation of photocells  
[NASA-CASE-XLA-00183] c14 N70-40239

Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c04 N76-26175

**DRILL BITS**

Impact bit for cutting, collecting, and storing samples such as lunar rock cuttings  
[NASA-CASE-XNP-01412] c15 N70-42034

Hole cutter --- drill bits and rotating shaft  
[NASA-CASE-MFS-22649-1] c37 N75-25186

**DRILLING**

Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c37 N80-29705

**DRILLS**

Rotary impact-type rock drill for recovering rock cuttings  
[NASA-CASE-XNP-07478] c14 N69-21923

Auger-type soil penetrometer for burrowing into soil formations  
[NASA-CASE-XNP-05530] c14 N73-32321

**DRIVES**

Inverter drive circuit for semiconductor switch  
[NASA-CASE-LEW-10233] c10 N71-27126

**DROPS (LIQUIDS)**

Development of droplet monitoring probe for use in analysis of droplet propagation in mixed-phase fluid stream  
[NASA-CASE-NPO-10985] c14 N73-20478

Method of forming frozen spheres in a force-free drop tower --- microballoons for inertial confinement fusion  
[NASA-CASE-NPO-14845-1] c31 N81-16328

**DRUGS**

Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c25 N75-12086

**DRYING**

Drying chamber for photographic sheet material  
[NASA-CASE-GSC-11074-1] c14 N73-28489

**DRYING APPARATUS**

Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove  
[NASA-CASE-XLE-02531] c05 N71-23080

**DUCTED FANS**

Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c07 N79-14095

**DUCTS**

Quick disconnect duct coupling device for single-handed operation  
[NASA-CASE-MFS-20395] c15 N71-24903

Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c37 N76-14460

Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c31 N80-32583

**DURABILITY**

Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c37 N80-32717

**DUST COLLECTORS**

Device for removing plastic dust cover from digital computer disk packs for inspection and cleaning  
[NASA-CASE-LAR-10590-1] c15 N76-26819

**DYE LASERS**

Infrared tunable dye laser with nonlinear wavelength mixing crystal in optical cavity  
[NASA-CASE-ARC-10463-1] c09 N73-32111

Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c36 N75-19655

**DYES**

Dye penetrant and technique for nondestructive tests of solid surfaces contacted by liquid oxygen  
[NASA-CASE-XMF-02221] c18 N71-27170

Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c35 N82-11432

**DYNAMIC CHARACTERISTICS**

Dynamic sensor for gas pressure or density measurement  
[NASA-CASE-XAC-02877] c14 N70-41681

Design of precision vertical alignment system using laser with gravitationally sensitive cavity  
[NASA-CASE-ARC-10444-1] c16 N73-33397

Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c37 N81-22358

**DYNAMIC CONTROL**

Motion restraining device  
[NASA-CASE-NPO-13619-1] c37 N78-16369

Systems for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c71 N82-11861

**DYNAMIC LOADS**

Multilegged support system for wind tunnel test models subjected to thermal dynamic loading  
[NASA-CASE-XLA-01326] c11 N71-21481

Apparatus for measuring load on cable under static or dynamic conditions comprising pulleys pivoting structure against restraint of tension strap  
[NASA-CASE-XMS-04545] c15 N71-22878

Development and characteristics of device for indicating and recording magnitude of force applied in axial direction  
[NASA-CASE-MSC-15626-1] c14 N72-25411

**DYNAMIC MODULUS OF ELASTICITY**

Apparatus for testing metallic and nonmetallic beams or rods by bending at high temperatures in vacuum or inert atmosphere  
[NASA-CASE-XLE-01300] c15 N70-41993

**DYNAMIC RESPONSE**

Lunar and planetary gravity simulator to test vehicular response to landing  
[NASA-CASE-XLA-00493] c11 N70-34786

Pressure sensor network for measuring liquid dynamic response in flight including fuel tank acceleration, liquid slosh amplitude, and fuel depth monitoring  
[NASA-CASE-XLA-05541] c12 N71-26387

Response analyzing apparatus for liquid vapor interface sensor of sloshing rocket propellant  
[NASA-CASE-MFS-11204] c14 N71-29134

Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c07 N79-14095

**DYNAMIC STRUCTURAL ANALYSIS**

Development of system for measuring damping characteristics of structure or system subjected to random forces or influences  
[NASA-CASE-ARC-10154-1] c14 N72-22440

**DYNAMIC TESTS**

Hydraulic support equipment for full scale dynamic testing of large rocket vehicle under free flight conditions  
[NASA-CASE-XMF-01772] c11 N70-41677

Hydraulic support apparatus for dynamic testing of space vehicles under near-free flight conditions  
[NASA-CASE-XMF-03248] c11 N71-10604

**DYNAMOMETERS**

Dynamometer measuring microforce thrust produced by ion engine  
[NASA-CASE-XLE-00702] c14 N70-40203

Development of thrust dynamometer for measuring performance of jet and rocket engines  
[NASA-CASE-XLE-05260] c14 N71-20429

## E

**EAR**

Ear oximeter for monitoring blood oxygenation and pressure, pulse rate, and pressure pulse curve, using dc and ac amplifiers  
[NASA-CASE-XAC-05422] c04 N71-23185

**EARTH ATMOSPHERE**

Ablation sensor for measuring surface ablation

- rate of material on vehicles entering earths atmosphere on entry into planetary atmospheres  
[NASA-CASE-XLA-01791] c14 N71-22991
- EARTH CRUST**  
Seismic vibration source  
[NASA-CASE-NPO-14112-1] c46 N79-22679
- EARTH ORBITS**  
Electric furnace for vacuum and zero gravity melting of high melting point materials during earth orbit  
[NASA-CASE-MFS-20710] c11 N72-23215  
Design and development of space shuttle system for delivering payload to earth orbit or celestial orbit  
[NASA-CASE-MSC-12391] c30 N73-12884
- ECCENTRICS**  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c37 N81-25370
- ECHLETTE GRATINGS**  
Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NPO-14372-1] c35 N80-26635
- ECHOES**  
Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c52 N79-18580
- EDGES**  
Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c74 N80-24149
- EFFICIENCY**  
Recovering efficiency of solar cells damaged by environmental radiation through thermal annealing  
[NASA-CASE-XGS-04047-2] c03 N72-11062  
High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c32 N74-20863
- EFFLUENTS**  
Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c34 N77-24423  
Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c34 N79-24285
- EGRESS**  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c03 N81-29107
- EJECTION**  
Apparatus for ejecting covers of instrument packages using differential pressure principle  
[NASA-CASE-XMF-04132] c15 N69-27502
- EJECTION SEATS**  
Ejector for separating astronaut from ejection seat during prelaunch or initial launch phase of flight  
[NASA-CASE-XMS-04625] c05 N71-20718
- EJECTORS**  
Automatic ejection valve for attitude control and midcourse guidance of space vehicles  
[NASA-CASE-XNP-0676] c15 N70-38996  
Ejector for separating astronaut from ejection seat during prelaunch or initial launch phase of flight  
[NASA-CASE-XMS-04625] c05 N71-20718  
Latching mechanism with pivoting catch and self-contained spring ejector  
[NASA-CASE-XLA-03538] c15 N71-24897
- ELASTIC BODIES**  
Belleville spring assembly with elastic guides having low hysteresis  
[NASA-CASE-XNP-09452] c15 N69-27504  
Development of systems for automatically and continually suppressing or attenuating bending motion in elastic bodies  
[NASA-CASE-XAC-05632] c32 N71-23971  
Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c35 N74-27865
- ELASTIC DEFORMATION**  
Measuring shear-creep compliance of solid and liquid materials used in spacecraft components  
[NASA-CASE-XLE-01481] c14 N71-10781  
Development of systems for automatically and continually suppressing or attenuating bending motion in elastic bodies  
[NASA-CASE-XAC-05632] c32 N71-23971
- ELASTIC MEDIA**  
Miniature vibration isolator utilizing elastic tubing material  
[NASA-CASE-XLA-01019] c15 N7C-40156
- ELASTIC PROPERTIES**  
Elastic universal joint for rocket motor mounting  
[NASA-CASE-XNP-00416] c15 N70-36947  
Resilient vehicle wheel for lunar surface travel  
[NASA-CASE-MFS-20400] c31 N71-18611  
Threadless fastener apparatus comprising receiving apertures for plurality of articles, self-locked condition, and capable of using nonmalleable materials in both ends  
[NASA-CASE-XFR-05302] c15 N71-23254  
Chemical and elastic properties of fluorinated polyurethanes  
[NASA-CASE-NFC-10767-1] c06 N73-33076  
Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c35 N75-19615
- ELASTIC SHEETS**  
Hot forming of plastic sheets  
[NASA-CASE-XMS-05516] c15 N71-17803
- ELASTOMERS**  
Describing metal valve pintle with encapsulated elastomeric body  
[NASA-CASE-MSC-12116-1] c15 N71-17648  
Development of apparatus for measuring successive increments of strain on elastomers  
[NASA-CASE-XMF-04680] c15 N71-19489  
Preparation of elastomeric diamine silazane polymers  
[NASA-CASE-XMF-04133] c06 N71-20717  
Leak resistant bonded elastomeric seal for secondary electrochemical cells  
[NASA-CASE-XGS-02631] c03 N71-23006  
Conductive elastomeric extensometer  
[NASA-CASE-MFS-21049-1] c52 N74-27864  
Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c37 N76-24575  
Method of making hollow elastomeric bodies  
[NASA-CASE-NFC-13535-1] c37 N76-31524  
Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c27 N78-32262  
Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NFC-13137-1] c27 N80-32514  
Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c27 N80-32515  
Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NFC-10830-1] c27 N81-15104  
Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c27 N81-17259  
The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c27 N81-17262  
Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c27 N81-24256  
Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c37 N81-26447
- ELECTRIC ARCS**  
Magnetically diffused radial electric arc heater  
[NASA-CASE-XLA-J0330] c33 N70-34540  
Controlled arc spot welding method  
[NASA-CASE-XMF-00392] c15 N70-34814  
Triggering system for electric arc driven impulse wind tunnel  
[NASA-CASE-XMF-00411] c11 N70-36913  
Electric arc device for minimizing electrode ablation and heating gases to supersonic or hypersonic wind tunnel temperatures  
[NASA-CASE-XAC-00319] c25 N70-41628  
Electric arc heater with supersonic nozzle and fixed arc length for use in high temperature wind tunnels  
[NASA-CASE-XAC-01677] c09 N71-20816  
Arc electrode of graphite with tantalum ball tip  
[NASA-CASE-XLE-04788] c09 N71-22987  
High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c33 N74-12913  
Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c33 N75-29318
- ELECTRIC BATTERIES**  
Spacecraft battery seals

[NASA-CASE-XGS-03864] c15 N69-24320  
Sealed electric storage battery with gas manifold interconnecting each cell  
[NASA-CASE-XNP-03378] c03 N71-11051  
Battery charging system with cell to cell voltage balance  
[NASA-CASE-XGS-05432] c03 N71-19438  
Development and characteristics of battery charging circuits with coulometer for control of available current  
[NASA-CASE-GSC-10487-1] c03 N71-24719  
Heat activated emf cells with aluminum anode  
[NASA-CASE-LEW-11359] c03 N71-28579  
Development of device for simulating charge and discharge cycle of battery in synchronous orbit  
[NASA-CASE-GSC-11211-1] c03 N72-25020  
Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NFO-11806-1] c44 N74-19693  
Battery testing device --- for testing cells of multiple-cell battery  
[NASA-CASE-MFS-20761-1] c44 N74-27519  
Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c44 N76-14601  
Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c44 N76-18643  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c44 N76-27664  
Voltage regulator for battery power source --- using a bipolar transistor  
[NASA-CASE-FRC-10116-1] c33 N79-23345  
In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c27 N81-24257

## ELECTRIC BRIDGES

Pulsed excitation voltage circuit for strain gage bridge transducers  
[NASA-CASE-FRC-10036] c09 N72-22200  
Bridge-type gain control circuit  
[NASA-CASE-GSC-10786-1] c10 N72-28241  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c33 N75-25041  
Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c33 N78-13320

## ELECTRIC CELLS

Expanding and contracting connector strip for solar cell array of Nimbus satellite  
[NASA-CASE-XGS-01395] c03 N69-21539  
Design and characteristics of heat activated electric cell with anode made from one or more alkali metals and cathode made from oxidizing material  
[NASA-CASE-LEW-11358] c03 N71-26084  
Development and characteristics of ion-exchange membrane and electrode assembly for fuel cells or electrolysis cells  
[NASA-CASE-XMS-02063] c03 N71-29044

## ELECTRIC CHARGE

Indicator device for monitoring charge of wet cell battery, using semiconductor light emitter and photodetector  
[NASA-CASE-NFO-10194] c03 N71-20407  
Automatically charging battery of electric storage cells  
[NASA-CASE-XNP-04758] c03 N71-24605

## ELECTRIC CHOPPERS

Monostable multivibrator for conserving power in spacecraft systems  
[NASA-CASE-GSC-10082-1] c10 N72-20221  
Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c33 N76-17295

## ELECTRIC COILS

Broadband chokes and absorbers to reduce spurious radiation patterns of antenna array caused by support structures  
[NASA-CASE-XMS-05303] c07 N69-27462

## ELECTRIC CONDUCTORS

Hollow spherical electrode for shielding dielectric junction between high voltage conductor and insulator  
[NASA-CASE-XLE-03778] c09 N69-21542  
Conductor for connecting parallel cells into submodules in series to form solar cell matrix  
[NASA-CASE-NPO-10821] c03 N71-19545  
Electrical switching device comprising conductive liquid confined within square loop of deformable nonconductive tubing also used

for leveling  
[NASA-CASE-NPO-10037] c09 N71-19610  
Dry electrode design with wire sandwiched between two flexible conductive discs for monitoring physiological responses  
[NASA-CASE-FRC-10029] c09 N71-24618  
Development of process for forming insulating layer between two electrical conductor or semiconductor materials  
[NASA-CASE-LEW-10489-1] c15 N72-25447  
Improved injector with porous plug for bubbles of gas into feed lines of electrically conductive liquid  
[NASA-CASE-NFC-11377] c15 N73-27406  
Solar cell grid patterns  
[NASA-CASE-NFC-13087-2] c44 N76-31666  
Velocity measurement system  
[NASA-CASE-MFS-23363-1] c35 N78-32396  
Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c33 N81-27397

## ELECTRIC CONNECTORS

Distribution of currents to circuits using electrical adaptor  
[NASA-CASE-XLA-01288] c09 N69-21470  
Fixture for simultaneously supporting several components for electrical testing  
[NASA-CASE-XNP-06032] c09 N69-21926  
Releasable coupling device designed to receive and retain matching ends of electrical connectors  
[NASA-CASE-XMS-07846-1] c09 N69-21927  
Electrical feedthrough connection for printed circuit boards  
[NASA-CASE-XMF-01483] c14 N69-27431  
Electrical connector pin with wiping action to assure reliable contact  
[NASA-CASE-XMF-04238] c09 N69-39734  
Rectangular electric conductors for conductor cables to withstand spacecraft vibration and controlled atmosphere  
[NASA-CASE-MFS-14741] c09 N70-20737  
Patent data on terminal insert connector for flat electric cables  
[NASA-CASE-XMF-00324] c09 N70-34596  
Electric connector for printed cable to printed cable or to printed board  
[NASA-CASE-XMF-00369] c09 N70-36494  
Electrical connection for printed circuits on common board, using bellows principle in rivet  
[NASA-CASE-XNP-05082] c15 N70-41960  
Method of making molded electric connector for use with flat conductor cables  
[NASA-CASE-XMF-03498] c15 N71-15986  
Design and development of electric connectors for rigid and semirigid coaxial cables  
[NASA-CASE-XNP-04732] c09 N71-20851  
Connector internal force gage for measuring strength of electrical connection  
[NASA-CASE-XNP-03918] c14 N71-23087  
Maintaining current flow through solar cells with open connection using shunting diode  
[NASA-CASE-XLE-04535] c03 N71-23354  
Electrical connections for thin film hybrid microcircuits  
[NASA-CASE-XMS-02182] c10 N71-28783  
Breakaway multiwire electrical cable connector with particular application for umbilical type cables  
[NASA-CASE-NPO-11140] c15 N72-17455  
Reliability of electrical connectors after heat sterilization  
[NASA-CASE-NPO-10694] c09 N72-20200  
Development of electric connector and pin assembly with radio frequency absorbing sleeve to reduce radio frequency interference  
[NASA-CASE-XLA-02609] c09 N72-25256  
Electrical interconnection of unilluminated solar cells in solar battery array  
[NASA-CASE-GSC-10344-1] c03 N72-27053  
Separable flat cable connector with isolated electrical contacts  
[NASA-CASE-MFS-20757] c09 N72-28225  
Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c33 N74-26977  
Connector --- for connecting circuits on different layers of multilayer printed circuit boards

[NASA-CASE-LAR-11709-1] c37 N76-27567  
 Percutaneous connector device  
 [NASA-CASE-KSC-10849-1] c52 N77-14738  
 Magnetic electrical connectors for biomedical  
 percutaneous implants  
 [NASA-CASE-KSC-11030-1] c52 N77-25772  
 Electrical self-aligning connector  
 [NASA-CASE-MFS-25211-1] c33 N80-32651  
 Decommulator patchboard verifier  
 [NASA-CASE-KSC-11065-1] c33 N81-26359  
**ELECTRIC CONTACTS**  
 Solid state switching circuit design to increase  
 current capacity of low rated relay contacts  
 [NASA-CASE-XNP-09228] c09 N69-27500  
 Characteristics of hermetically sealed electric  
 switch with flexible operating capability  
 [NASA-CASE-XNP-09808] c09 N71-12518  
 Electrode connection for n-on-p silicon solar cell  
 [NASA-CASE-XLE-04787] c03 N71-20492  
 Development of slip ring assembly with inner and  
 outer peripheral surfaces used as electrical  
 contacts for brushes  
 [NASA-CASE-XMF-01049] c15 N71-23049  
 Separable flat cable connector with isolated  
 electrical contacts  
 [NASA-CASE-MFS-20757] c09 N72-28225  
 Electrostatic measurement system --- for  
 contact-electrifying a dielectric  
 [NASA-CASE-MFS-22129-1] c33 N75-18477  
 Process for preparing liquid metal electrical  
 contact device  
 [NASA-CASE-LEW-11978-1] c33 N77-26385  
**ELECTRIC CONTROL**  
 Switching series regulator with gating control  
 network  
 [NASA-CASE-XMS-09352] c09 N71-23316  
**ELECTRIC CURRENT**  
 Including didymium hydrate in nickel hydroxide  
 of positive electrode of storage batteries to  
 increase ampere hour capacity  
 [NASA-CASE-XGS-03505] c03 N71-10608  
 Development of in-line fuse device for  
 protection of electric circuits from excessive  
 currents and voltages  
 [NASA-CASE-MSC-12135-1] c09 N71-12526  
 Micromicroampere current measuring circuit, with  
 two subminiature thermionic diodes with  
 filament cathodes  
 [NASA-CASE-XNP-00384] c09 N71-13530  
 Connector internal force gage for measuring  
 strength of electrical connection  
 [NASA-CASE-XNP-03918] c14 N71-23087  
 Electric circuit for producing high current  
 pulse having fast rise and fall time  
 [NASA-CASE-XMS-04919] c09 N71-23270  
 Electric circuit for reversing direction of  
 current flow  
 [NASA-CASE-XNP-00952] c10 N71-23271  
 Maintaining current flow through solar cells  
 with open connection using shunting diode  
 [NASA-CASE-XLE-04535] c03 N71-23354  
 Color television system utilizing single gun  
 current sensitive color cathode ray tube  
 [NASA-CASE-ERC-10098] c09 N71-28618  
 Current dependent variable inductance for input  
 filter chokes of ac or dc power supplies  
 [NASA-CASE-ERC-10139] c09 N72-17154  
 Amplifying circuit with constant current source  
 for accumulator load and high gain voltage  
 amplification  
 [NASA-CASE-NPO-11023] c09 N72-17155  
 Commutator for steering precisely controlled  
 bidirectional currents through numerous loads  
 by use of magnetic core shift registers  
 [NASA-CASE-NFO-10743] c08 N72-21199  
 Current protection equipment for saturable core  
 transformers  
 [NASA-CASE-ERC-10075-2] c09 N72-22196  
 Development of thermal to electric power  
 conversion system using solid state switches  
 of electrical currents to load for Seebeck  
 effect compensation  
 [NASA-CASE-NPO-11388] c03 N72-23048  
 Load current sensor for series pulse width  
 modulated power supply  
 [NASA-CASE-GSC-10656-1] c09 N72-25249  
 Electrode with multiple columnar conductors for  
 limiting field emission current  
 [NASA-CASE-ERC-10015-2] c10 N72-27246

Means of vapor deposition using electric current  
 and evaporator filament  
 [NASA-CASE-LAR-10541-1] c15 N72-32487  
 Lightning current measuring systems  
 [NASA-CASE-KSC-10807-1] c33 N75-26246  
 Overload protection system for power inverter  
 [NASA-CASE-NFO-13872-1] c33 N78-10377  
 Shunt regulation electric power system  
 [NASA-CASE-GSC-10135] c33 N78-17296  
 Lightning current waveform measuring system  
 [NASA-CASE-KSC-11018-1] c33 N79-10337  
 Electroexplosive device  
 [NASA-CASE-NPO-13858-1] c28 N79-11231  
 Remote lightning monitor system  
 [NASA-CASE-KSC-11031-1] c33 N79-11315  
 Lightning current detector  
 [NASA-CASE-KSC-11057-1] c33 N79-14305  
 Driver for solar cell I-V characteristic plots  
 [NASA-CASE-NFO-14096-1] c44 N80-18551  
 Electrical power generating system --- for  
 windpowered generation  
 [NASA-CASE-MFS-24368-3] c33 N81-22280  
**ELECTRIC DISCHARGES**  
 Electric discharge apparatus for  
 electrohydraulic explosive forming  
 [NASA-CASE-XMF-00375] c15 N70-34249  
 High voltage pulse generator for testing flash  
 and ignition limits of nonmetallic materials  
 in controlled atmospheres  
 [NASA-CASE-MSC-12178-1] c09 N71-13518  
 Pulse generating circuit for operation at very  
 high duty cycles and repetition rates  
 [NASA-CASE-XNP-00745] c10 N71-28960  
 Rapidly pulsed, high intensity, incoherent light  
 source  
 [NASA-CASE-XLE-2529-3] c33 N74-20859  
 Voltage feed through apparatus having reduced  
 partial discharge  
 [NASA-CASE-GSC-12347-1] c33 N80-18286  
**ELECTRIC ENERGY STORAGE**  
 Electric current measuring apparatus design  
 including saturable core transformer and  
 energy storage device to avoid magnetizing  
 current errors from transformer output winding  
 [NASA-CASE-XGS-02439] c14 N71-19431  
 Lead-oxygen dc power supply system having a  
 closed loop oxygen and water system  
 [NASA-CASE-MFS-23059-1] c44 N76-27664  
 Electrically rechargeable REDOX flow cell  
 [NASA-CASE-LEW-12220-1] c44 N77-14581  
 Gels as battery separators for soluble  
 electrode cells  
 [NASA-CASE-LEW-12364-1] c44 N77-22606  
 Electrochemical cell for rebalancing REDOX flow  
 system  
 [NASA-CASE-LEW-13150-1] c44 N79-26474  
 Toroidal cell and battery --- storage battery  
 for high amp-hour load applications  
 [NASA-CASE-LEW-12918-1] c44 N81-24521  
**ELECTRIC EQUIPMENT**  
 Characteristics of high power, low distortion,  
 alternating current power amplifier  
 [NASA-CASE-LAR-10218-1] c09 N70-34559  
 Design and development of electric generator for  
 space power system  
 [NASA-CASE-XLE-04250] c09 N71-20446  
 Development of electrical system for measuring  
 high impedance  
 [NASA-CASE-XMS-08589-1] c09 N71-20569  
 Design, development, and operating principles of  
 power supply with starting circuit which is  
 independent of voltage regulator  
 [NASA-CASE-XMS-01991] c09 N71-21449  
 Development of method for improving signal to  
 noise ratio and accuracy of Wheatstone bridge  
 type radiation measuring instrument  
 [NASA-CASE-XLA-02810] c14 N71-25901  
 Design and development of buck-boost voltage  
 regulator circuit with additive or subtractive  
 alternating current impressed on variable  
 direct current source voltage  
 [NASA-CASE-GSC-10735-1] c10 N71-26085  
 Development and characteristics of  
 electronically resettable fuse with saturable  
 core current sensing transformer having two  
 outside legs and center leg  
 [NASA-CASE-XGS-11177] c09 N71-27001  
 Development and characteristics of voltage  
 regulator for connection in series with

alternating current source and load using three leg, two-window transformer  
[NASA-CASE-ERC-10113] c09 N71-27053

Development of electric circuit for production of different pulse width signals  
[NASA-CASE-XLA-C7768] c09 N71-29139

Development of solar energy powered heliotrope assembly to orient solar array toward sun  
[NASA-CASE-GSC-10945-1] c21 N72-31637

Development of temperature compensated light source with components and circuitry for maintaining luminous intensity independent of temperature variations  
[NASA-CASE-ARC-10467-1] c09 N73-14214

Development and characteristics of hermetically sealed coaxial package for containing microwave semiconductor components  
[NASA-CASE-GSC-10791-1] c15 N73-14469

Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c33 N74-17929

Sprag solenoid brake --- development and operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c37 N74-26976

Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c37 N75-18573

Self-regulating proportionally controlled heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c77 N75-20140

**ELECTRIC EQUIPMENT TESTS**

Fixture for simultaneously supporting several components for electrical testing  
[NASA-CASE-XNP-06032] c09 N69-21926

Electrical testing apparatus for detecting amplitude and width of transient pulse  
[NASA-CASE-XMF-06519] c09 N71-12519

Variable water load for dissipating large amounts of electrical power during high voltage power supply tests  
[NASA-CASE-XNP-05381] c09 N71-20842

**ELECTRIC FIELD STRENGTH**

Low impedance apparatus for measuring electrostatic field intensity near space vehicles  
[NASA-CASE-XLE-00820] c14 N71-16014

Space environment simulation system for measuring spacecraft electric field strength in plasma sheath  
[NASA-CASE-XLE-02038] c09 N71-16086

Device for measuring two orthogonal components of force with gallium flotation of measuring target for use in vacuum environments  
[NASA-CASE-XAC-04885] c14 N71-23790

Apparatus to determine electric field strength by measuring deflection of electron beam impinging on target  
[NASA-CASE-XMF-06617] c09 N71-24843

**ELECTRIC FIELDS**

Electric analog for measuring induced drag on nonplanar airfoils  
[NASA-CASE-XLA-00755] c01 N71-13410

Electric analog for measuring induced drag on nonplanar airfoils  
[NASA-CASE-XLA-05828] c01 N71-13411

Instrument for measuring potentials on two dimensional electric field plot  
[NASA-CASE-XLA-08493] c10 N71-19421

Electron beam deflection devices for measuring electric fields  
[NASA-CASE-XMF-10289] c14 N71-23699

Electrodes having array of small surfaces for field ionization  
[NASA-CASE-ERC-10013] c09 N71-26678

Apparatus for determining distance to lighting strokes from single station by magnetic and electric field sensing antennas  
[NASA-CASE-KSC-10698] c07 N73-20175

Development and characteristics of apparatus for measuring intensity of electric field in atmosphere  
[NASA-CASE-KSC-10730-1] c14 N73-32318

Electric field measuring and display system --- for cloud formations  
[NASA-CASE-KSC-10731-1] c33 N74-27862

**ELECTRIC FILTERS**

Describing static inverter with single or multiple phase output  
[NASA-CASE-XMF-00663] c08 N71-18752

Apparatus for filtering input signals  
[NASA-CASE-NPO-10198] c09 N71-24806

Active RC filter networks and amplifiers for deep space magnetic field measurement  
[NASA-CASE-XAC-05462-2] c10 N72-17171

Multiloop RC active filter network with low parameter sensitivity and low amplifier gain  
[NASA-CASE-ARC-10192] c09 N72-21245

Development of electric connector and pin assembly with radio frequency absorbing sleeve to reduce radio frequency interference  
[NASA-CASE-XLA-02609] c09 N72-25256

Filter for third order phase locked loops in signal receivers  
[NASA-CASE-NPO-11941-1] c10 N73-27171

**ELECTRIC FUSES**

Development of in-line fuse device for protection of electric circuits from excessive currents and voltages  
[NASA-CASE-MSC-12135-1] c09 N71-12526

Single electrical circuit component combining diode, fuse, and blown indicator with elongated tube of heat resistant transparent material  
[NASA-CASE-XKS-03381] c09 N71-22796

Fused switch  
[NASA-CASE-XMS-01244-1] c33 N79-33393

**ELECTRIC GENERATORS**

Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c03 N69-21330

Design and development of electric generator for space power system  
[NASA-CASE-XLE-04250] c09 N71-20446

Development and characteristics of single or double pulse generator which produces constant width pulses in nanosecond region  
[NASA-CASE-XGS-03427] c10 N71-23029

Development of slip ring assembly with inner and outer peripheral surfaces used as electrical contacts for brushes  
[NASA-CASE-XMF-01049] c15 N71-23049

Conversion of positive dc voltage to positive dc voltage of lower amplitude  
[NASA-CASE-XMF-14301] c09 N71-23188

High temperature ferromagnetic cobalt-base alloy for electrical power generating equipment  
[NASA-CASE-XLE-03629] c17 N71-23248

Solid state integrator for converting variable width pulses into analog voltage  
[NASA-CASE-XLA-03356] c10 N71-23315

Electric power system with circulatory liquid coolant cooling system  
[NASA-CASE-MFS-14114-2] c09 N71-24807

Device utilizing RC rate generators for continuous slow speed measurement  
[NASA-CASE-XMF-02966] c10 N71-24863

Device for voltage conversion using controlled pulse widths and arrangements to generate ac output voltage  
[NASA-CASE-MFS-10068] c10 N71-25139

Multiple varactor for generating high frequencies with high power and high conversion efficiency  
[NASA-CASE-XMF-04958-1] c10 N71-26414

Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
[NASA-CASE-GSC-10114-2] c10 N71-27366

Electric power system with thermionic diodes and circulatory liquid metal coolant lines  
[NASA-CASE-MFS-14114] c33 N71-27862

Power converters for supplying direct current at one voltage from source at another voltage  
[NASA-CASE-XER-11046] c09 N72-22203

Inductive-capacitive loops as load insensitive power converters  
[NASA-CASE-ERC-10268] c09 N72-25252

Dc to ac to dc converter with transistor driven synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c09 N72-25253

Device for converting electromagnetic wave energy into electric power  
[NASA-CASE-GSC-11394-1] c09 N73-32109

Heat operated cryogenic electrical generator  
[NASA-CASE-NFC-13303-1] c20 N75-24837

Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c36 N75-30524

Smoke generator  
[NASA-CASE-ARC-10905-1] c37 N77-13418



- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c33 N77-26387
- Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c44 N80-21828
- Natural turbulence electrical power generator  
--- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c44 N80-29834
- Electrical power generating system --- for  
windpowered generation  
[NASA-CASE-MFS-24368-3] c33 N81-22280
- ELECTRIC IGNITION**
- Method of making solid propellant rocket motor  
having reliable high altitude capabilities,  
long shelf life, and capable of firing with  
nozzle closure with foamed plastic permanent  
mandrel  
[NASA-CASE-XLA-04126] c28 N71-26779
- ELECTRIC MOTOR VEHICLES**
- Automotive absorption air conditioner utilizing  
solar and motor waste heat  
[NASA-CASE-NPO-15183] c44 N80-25843
- ELECTRIC MOTORS**
- Automatic control of voltage supply to direct  
current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39987
- Electronic circuit system for controlling  
electric motor speed  
[NASA-CASE-XMF-01129] c09 N70-38712
- Using electron beam switching for brushless  
motor commutation  
[NASA-CASE-XGS-01451] c09 N71-10677
- Direct current electromotive system for  
regenerative braking of electric motor  
[NASA-CASE-XMF-01096] c10 N71-16030
- Describing angular position and velocity sensing  
apparatus  
[NASA-CASE-XGS-05680] c14 N71-17585
- Reversible current directing circuitry for  
reversible motor control  
[NASA-CASE-XLA-09371] c10 N71-18724
- Stepping motor control apparatus exciting  
windings in proper time sequence to cause  
motor to rotate in either direction  
[NASA-CASE-GSC-10366-1] c10 N71-18772
- Electromagnetic braking arrangement for  
controlling rotor rotation in electric motor  
[NASA-CASE-XNP-06936] c15 N71-24695
- Electric motor control system with pulse width  
modulation for providing automatic null  
seeking servo  
[NASA-CASE-XMF-05195] c10 N71-24861
- Velocity limiting safety system for motor driven  
research vehicle  
[NASA-CASE-XLA-07473] c15 N71-24895
- Design and development of electric motor with  
stationary field and armature windings which  
operates on direct current  
[NASA-CASE-XGS-05290] c09 N71-25999
- Circuits for controlling reversible dc motor  
[NASA-CASE-XNP-07477] c09 N71-26092
- Pulse duration control device for driving slow  
response time loads in selected sequence  
including switching and delay circuits and  
magnetic storage  
[NASA-CASE-XGS-04224] c10 N71-26418
- Feedback control for direct current motor to  
achieve constant speed under varying loads  
[NASA-CASE-MFS-14610] c09 N71-28886
- Optimal control system for automatic speed  
regulation of electric driven motor vehicle  
[NASA-CASE-NPO-11210] c11 N72-20244
- Direct current motor including stationary field  
windings and stationary armature winding  
[NASA-CASE-XGS-07805] c15 N72-33476
- Speed control system for dc motor equipped with  
brushless Hall effect device  
[NASA-CASE-MFS-20207-1] c09 N73-32107
- Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c33 N77-26386
- Rotary electric device  
[NASA-CASE-GSC-12138-1] c33 N79-20314
- Controller for computer control of brushless dc  
motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c33 N81-20352
- A simplified power factor controller with  
increased energy saving circuit  
[NASA-CASE-MFS-25323-1] c33 N82-12349
- ELECTRIC NETWORKS**
- Electric network for monitoring temperatures,  
detecting critical temperatures, and  
indicating critical time duration  
[NASA-CASE-XMF-01097] c10 N71-16058
- Development and characteristics of single or  
double pulse generator which produces constant  
width pulses in nanosecond region  
[NASA-CASE-XGS-03427] c10 N71-23029
- Switching series regulator with gating control  
network  
[NASA-CASE-XMS-09352] c09 N71-23316
- Broadband frequency discriminator with resistive  
captive inductive networks  
[NASA-CASE-NPO-10096] c07 N71-24583
- ELECTRIC POTENTIAL**
- Battery charging system with cell to cell  
voltage balance  
[NASA-CASE-XGS-05432] c03 N71-19438
- Conversion of positive dc voltage to positive dc  
voltage of lower amplitude  
[NASA-CASE-XMF-14301] c09 N71-23188
- Solid state integrator for converting variable  
width pulses into analog voltage  
[NASA-CASE-XLA-03356] c10 N71-23315
- Device for monitoring voltage by generating  
signal when voltages drop below predetermined  
value  
[NASA-CASE-KSC-10020] c10 N71-27338
- Plotter device for automatically drawing  
equipotential lines on sheet of resistance paper  
[NASA-CASE-NFO-11134] c09 N72-21246
- Pulsed excitation voltage circuit for strain  
gage bridge transducers  
[NASA-CASE-FRC-10036] c09 N72-22200
- Power converters for supplying direct current at  
one voltage from source at another voltage  
[NASA-CASE-XER-11046] c09 N72-22203
- Continuously variable, voltage-controlled phase  
shifter  
[NASA-CASE-NPO-11129] c09 N72-33204
- Photoelectron spectrometer with means for  
stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c35 N78-10429
- Microcomputerized electric field meter  
diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411
- Driver for solar cell I-V characteristic plots  
[NASA-CASE-NFO-14096-1] c44 N80-18551
- Microwave integrated circuit for Josephson  
voltage standards  
[NASA-CASE-MFS-23845-1] c33 N81-17348
- Method and apparatus for detecting coliform  
organisms  
[NASA-CASE-ARC-11322-1] c51 N82-12739
- ELECTRIC POWER**
- Switching circuit with regeneratively connected  
transistors eliminating power consumption when  
not in use  
[NASA-CASE-XNP-02654] c10 N70-42032
- Variable water load for dissipating large  
amounts of electrical power during high  
voltage power supply tests  
[NASA-CASE-XNP-05381] c09 N71-20842
- Power factor control system for AC induction  
motors  
[NASA-CASE-MFS-23280-1] c33 N78-10376
- Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c33 N78-17296
- Electrical power generating system --- for  
windpowered generation  
[NASA-CASE-MFS-24368-3] c33 N81-22280
- ELECTRIC POWER PLANTS**
- Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c44 N78-32542
- ELECTRIC POWER SUPPLIES**
- Current dependent variable inductance for input  
filter chokes of ac or dc power supplies  
[NASA-CASE-ERC-10139] c09 N72-17154
- Development of thermal to electric power  
conversion system using solid state switches  
of electrical currents to load for Seebeck  
effect compensation  
[NASA-CASE-NPO-11388] c03 N72-23048
- Development of electrical circuit for  
suppressing oscillations across inductor  
operating in resonant mode  
[NASA-CASE-ERC-10403-1] c10 N73-26228
- Powerplexer for distribution of dc power levels  
to loads which require different voltages  
[NASA-CASE-MSC-12396-1] c03 N73-31988

Reliable electrical element heater using plural wire system and backup power sources  
[NASA-CASE-MFS-21462-1] c33 N74-14935

Temperature compensated current source  
[NASA-CASE-MSC-11235] c33 N78-17294

**ELECTRIC POWER TRANSMISSION**

Power switch with transfluxor type magnetic core  
[NASA-CASE-NPO-10242] c09 N71-24803

Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
[NASA-CASE-GSC-10114-1] c10 N71-27366

Powerplexer for distribution of dc power levels to loads which require different voltages  
[NASA-CASE-MSC-12396-1] c03 N73-31588

Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c44 N74-15870

Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c33 N81-19394

**ELECTRIC PROPULSION**

Electric propulsion engine test chamber  
[NASA-CASE-XLE-00252] c11 N70-34844

**ELECTRIC PULSES**

RC transistor circuit to indicate each pulse of pulse train and occurrence of nth pulse  
[NASA-CASE-XMF-00906] c09 N70-41655

Design and development of variable pulse width multiplier  
[NASA-CASE-XLA-02850] c09 N71-20447

Piezoelectric transducer for monitoring sound waves of physiological origin  
[NASA-CASE-XMS-05365] c14 N71-22993

Development and characteristics of single or double pulse generator which produces constant width pulses in nanosecond region  
[NASA-CASE-XGS-03427] c10 N71-23029

Solid state integrator for converting variable width pulses into analog voltage  
[NASA-CASE-XLA-03356] c10 N71-23315

Development and characteristics of electric circuitry for detecting electrical pulses rise time and amplitude  
[NASA-CASE-XMF-08804] c09 N71-24717

Circuit for measuring wide range of pulse rates by utilizing high capacity counter  
[NASA-CASE-XNP-06234] c10 N71-27137

Precision full wave rectifier circuit for rectifying incoming electrical signals having positive or negative polarity with only positive output signals  
[NASA-CASE-ARC-10101-1] c09 N71-33109

Phase modulating with odd and even finite power series of a modulating signal  
[NASA-CASE-LAR-11607-1] c32 N77-14292

Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c32 N79-23310

**ELECTRIC RELAYS**

Spark gap type protective circuit for fast sensing and removal of overvoltage conditions  
[NASA-CASE-XAC-08981] c09 N69-39897

Time division multiplexer with magnetic latching relays  
[NASA-CASE-XNP-00431] c09 N70-38998

Alarm system design for monitoring one or more relay circuits  
[NASA-CASE-XMS-10984-1] c10 N71-19417

Time division relay synchronizer with master sync pulse for activating binary counter to produce signal identifying time slot for station  
[NASA-CASE-GSC-10373-1] c07 N71-19773

Relay circuit breaker with magnetic latching to provide conductive and nonconductive paths for current devices  
[NASA-CASE-MSC-11277] c09 N71-29008

Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c44 N78-14625

**ELECTRIC ROCKET ENGINES**

Electric rocket engine with electron bombardment ionization chamber  
[NASA-CASE-XNP-04124] c28 N71-21822

**ELECTRIC STIMULI**

Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c51 N78-27733

**ELECTRIC SWITCHES**

Thermionic diode switch for use in high temperature region to chop current from dc source  
[NASA-CASE-NFO-10404] c03 N71-12255

Characteristics of hermetically sealed electric switch with flexible operating capability  
[NASA-CASE-XNP-09808] c09 N71-12518

Electrical switching device comprising conductive liquid confined within square loop of deformable nonconductive tubing also used for leveling  
[NASA-CASE-NPO-10037] c09 N71-19610

System for checking status of several double-throw switches by readout indications  
[NASA-CASE-XLA-08799] c10 N71-27272

Pulse generating circuit for operation at very high duty cycles and repetition rates  
[NASA-CASE-XNP-00745] c10 N71-28960

High dc switch for causing abrupt, cyclic, decreases of current to operate under zero or varying gravity conditions  
[NASA-CASE-LEW-10155-1] c09 N71-29035

Zero power telemetry actuated switch for biomedical equipment  
[NASA-CASE-ARC-10105] c09 N72-17153

Development of differential pressure control system using motion of mechanical diaphragms to operate electric switch  
[NASA-CASE-MFS-14216] c14 N73-13418

Fused switch  
[NASA-CASE-XMS-01244-1] c33 N79-33393

**ELECTRIC TERMINALS**

Electrical connector pin with wiping action to assure reliable contact  
[NASA-CASE-XMF-04238] c09 N69-39734

Patent data on terminal insert connector for flat electric cables  
[NASA-CASE-XMF-00324] c09 N70-34596

Tool attachment for spreading or moving away loose elements from terminal posts during winding of filamentary elements  
[NASA-CASE-XMF-02107] c15 N71-10809

Electrical spot terminal assembly for printed circuit boards  
[NASA-CASE-NPO-10034] c15 N71-17685

Device for resistance soldering electrical leads to solder cups of multiple terminal block  
[NASA-CASE-GSC-10913] c15 N72-22491

Development of electric connector and pin assembly with radio frequency absorbing sleeve to reduce radio frequency interference  
[NASA-CASE-XLA-02609] c09 N72-25256

Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c33 N74-26977

**ELECTRIC WELDING**

Development of electric weeding torch with casing on one end to form inert gas shield  
[NASA-CASE-XMF-02330] c15 N71-23798

Electrical resistance butt welder for welding fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c15 N73-14468

Process for welding compressor and turbine blades to rotors and discs of jet engines  
[NASA-CASE-LEW-10533-1] c15 N73-28515

**ELECTRIC WIRE**

Apparatus for forming wire grids for electric strain gages  
[NASA-CASE-XLE-00023] c15 N70-33330

Control of fusion welding through use of thermocouple wire  
[NASA-CASE-MFS-06074] c15 N71-20393

Ablation sensor for measuring char layer recession rate using electric wires  
[NASA-CASE-XLA-01794] c33 N71-21586

Device for resistance soldering electrical leads to solder cups of multiple terminal block  
[NASA-CASE-GSC-10913] c15 N72-22491

Lead attachment for high temperature operation of electronic devices  
[NASA-CASE-ERC-10224] c09 N72-25261

Means for accommodating large overstrain in lead wires --- by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10168-1] c33 N74-22865

Device for configuring multiple leads --- method for connecting electric leads to printed

- circuit board  
[NASA-CASE-MFS-22133-1] c33 N74-26577
- High current electrical lead --- for thermionic converters  
[NASA-CASE-LEW-16950-1] c33 N74-27683
- Wire stripper  
[NASA-CASE-FRC-16111-1] c37 N79-10419
- Method and apparatus for preparing multiconductor cable with flat conductors  
[NASA-CASE-MFS-10946-1] c31 N79-21226
- Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c31 N79-21227
- Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c33 N82-12346
- ELECTRICAL ENGINEERING**
- Counter-divider circuit for accuracy and reliability in binary circuits  
[NASA-CASE-XMF-00421] c09 N70-34502
- Vibrating element electrometer producing high conversion gain by input current control of elements resonant frequency displacement amplitude  
[NASA-CASE-XAC-02807] c09 N71-23021
- ELECTRICAL FAULTS**
- Overcurrent protecting circuit for push-pull transistor amplifiers  
[NASA-CASE-MSC-12033-1] c09 N71-13531
- Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
[NASA-CASE-GSC-10114-1] c10 N71-27366
- Test method and equipment for identifying faulty cells or connections in solar cell assemblies  
[NASA-CASE-NPO-10401] c03 N72-20033
- Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c60 N76-21914
- ELECTRICAL IMPEDANCE**
- High voltage transistor circuit  
[NASA-CASE-XNP-06937] c09 N71-19516
- Development of electrical system for measuring high impedance  
[NASA-CASE-XMS-06589-1] c09 N71-20569
- Signaling summary alarm circuit with semiconductor switch for faulty contact indications  
[NASA-CASE-XLE-03061-1] c10 N71-24798
- Signal conditioning circuit apparatus --- with constant input impedance  
[NASA-CASE-ARC-10348-1] c33 N75-19518
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525
- Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c33 N77-14335
- ELECTRICAL INSULATION**
- Water cooled solenoid capable of producing magnetic field intensities up to 100 kilogauss  
[NASA-CASE-XNP-01951] c09 N70-41929
- Method and apparatus for removing plastic insulation from wire using cryogenic equipment  
[NASA-CASE-MFS-10340] c15 N71-17628
- Nonconductive tube as feed system for plasma thruster  
[NASA-CASE-XLE-02902] c25 N71-21694
- Internal labyrinth and shield structure to improve electrical isolation of propellant feed source from ion thruster  
[NASA-CASE-LEW-10210-1] c28 N71-26781
- Development of process for forming insulating layer between two electrical conductor or semiconductor materials  
[NASA-CASE-LEW-10489-1] c15 N72-25447
- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c33 N74-21851
- Stored charge transistor  
[NASA-CASE-NPO-11156-2] c33 N75-31331
- Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c24 N75-33181
- Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c36 N78-17366
- Wire stripper  
[NASA-CASE-FRC-10111-1] c37 N79-10419
- ELECTRICAL MEASUREMENT**
- Capacitance measuring device for determining flare accuracy on tapered tubes  
[NASA-CASE-XKS-03495] c14 N69-39785
- Bootstrap unloading circuits for sampling transducer voltage sources without drawing current  
[NASA-CASE-XNP-09768] c09 N71-12516
- Micromicroampere current measuring circuit, with two subminiature thermionic diodes with filament cathodes  
[NASA-CASE-XNF-00384] c09 N71-13530
- Low impedance apparatus for measuring electrostatic field intensity near space vehicles  
[NASA-CASE-XLE-00820] c14 N71-16014
- Electric current measuring apparatus design including saturable core transformer and energy storage device to avoid magnetizing current errors from transformer output winding  
[NASA-CASE-XGS-02439] c14 N71-19431
- High voltage divider system for attenuating high voltages to convenient levels suitable for introduction to measuring circuits  
[NASA-CASE-XLE-02008] c09 N71-21583
- Ablation sensor for measuring char layer recession rate using electric wires  
[NASA-CASE-XLA-01794] c33 N71-21586
- Current measurement by use of Hall effect generator  
[NASA-CASE-XAC-01662] c14 N71-23037
- Connector internal force gage for measuring strength of electrical connection  
[NASA-CASE-XNF-03918] c14 N71-23087
- Voltage range selection apparatus for sensing and applying voltages to electronic instruments without loading signal source  
[NASA-CASE-XMS-06497] c14 N71-26244
- Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c33 N75-26246
- Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c44 N76-14601
- Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c33 N76-19339
- Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c33 N76-21390
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525
- Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c33 N80-32650
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c35 N81-12389
- ELECTRICAL PROPERTIES**
- Voltage drift compensation circuit for analog-to-digital converter  
[NASA-CASE-XNP-04780] c08 N71-19687
- Development and characteristics of electronically resettable fuse with saturable core current sensing transformer having two outside legs and center leg  
[NASA-CASE-XGS-11177] c09 N71-27001
- Development and characteristics of voltage regulator for connection in series with alternating current source and load using three leg, two-window transformer  
[NASA-CASE-ERC-10113] c09 N71-27053
- Development of system with electrical properties which vary with changes in temperature for use with feedback loop in operational amplifier circuit  
[NASA-CASE-MSC-13276-1] c14 N71-27058
- Electrically coupled individually encapsulated solar cell matrix  
[NASA-CASE-NPO-11190] c03 N71-34044
- Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c44 N74-19693
- Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c35 N76-15434
- Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c27 N80-24437
- ELECTRICAL RESISTANCE**
- Development of electrical system for indicating optimum contact between electrode and metal surface to permit improved soldering operation  
[NASA-CASE-KSC-10242] c15 N72-23497

- Radio frequency source resistance measuring instruments of varied design  
[NASA-CASE-NPO-11291-1] c14 N73-30388
- Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c33 N80-32650
- ELECTRICAL RESISTIVITY**
- Describing method for vapor deposition of gallium arsenide films to manganese substrates to provide semiconductor devices with low resistance substrates  
[NASA-CASE-XNP-01328] c26 N71-18064
- Simulating operation of thermopile vacuum gage tube at high and low pressures  
[NASA-CASE-XLA-02758] c14 N71-18481
- Electrically conductive fluorocarbon polymers  
[NASA-CASE-XL2-06774-2] c06 N72-25150
- Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c33 N76-19339
- Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c27 N78-14164
- Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315
- Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MS-C-12662-1] c33 N79-12331
- Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c24 N79-14156
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c33 N80-24549
- Electrical self-aligning connector  
[NASA-CASE-MPS-25211-1] c33 N80-32651
- High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529
- ELECTRICITY**
- Thermionic converter for converting heat energy directly into electrical energy  
[NASA-CASE-XLE-01903] c22 N71-23599
- ELECTRO-OPTICS**
- Electro-optical system with scan-in illuminator and scan-out photosensor for scanning variable transmittance objects  
[NASA-CASE-NPO-11106] c14 N70-34697
- Electro-optical system for maintaining two-axis alignment during milling operations on large tank-sections  
[NASA-CASE-XMP-00908] c14 N70-40238
- Automatic polarimeter capable of measuring transient birefringence changes in electro-optic materials  
[NASA-CASE-XNP-08883] c23 N71-16101
- Design and development of light sensing device for controlling orientation of object relative to sun or other light source  
[NASA-CASE-NPO-11201] c14 N72-27409
- Electro-optical stabilization of calibrated light source  
[NASA-CASE-MS-C-12293-1] c14 N72-27411
- Optical conversion method --- for spacecraft television  
[NASA-CASE-MS-C-12618-1] c74 N78-17865
- Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c74 N80-21138
- ELECTROACOUSTIC TRANSDUCERS**
- Transducer for monitoring oxygen flow in respirator  
[NASA-CASE-FRC-10012] c14 N72-17329
- Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c12 N75-24774
- CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c35 N80-20559
- ELECTROACOUSTIC WAVES**
- Phonocardiogram simulator producing electrical voltage waves to control amplitude and duration between simulated sounds  
[NASA-CASE-XKS-10804] c05 N71-24606
- ELECTROCARDIOGRAPHY**
- Phonocardiogram simulator producing electrical voltage waves to control amplitude and duration between simulated sounds  
[NASA-CASE-XKS-10804] c05 N71-24606
- Development of instantaneous reading tachometer for measuring electrocardiogram signal rate  
[NASA-CASE-MPS-20418] c14 N73-24473
- Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MS-C-14339-1] c05 N75-24716
- Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c52 N80-33081
- Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c52 N81-14612
- ELECTROCATALYSTS**
- Electrocatalyst for oxygen reduction in low temperature alkaline fuel cell  
[NASA-CASE-HQN-10537-1] c06 N72-10138
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c33 N80-20487
- Zirconium carbide as an electrocatalyst for the chromous/chromic redox couple  
[NASA-CASE-LEW-13246-1] c25 N81-26203
- ELECTROCHEMICAL CELLS**
- Apparatus for measuring polymer membrane expansion in electrochemical cells  
[NASA-CASE-XGS-03865] c14 N69-21363
- Preventing pressure buildup in electrochemical cells by reacting palladium oxide with evolved hydrogen  
[NASA-CASE-XGS-01419] c03 N70-41864
- Nonmagnetic hermetically sealed battery case made of epoxy resin and woven glass tape for use with electrochemical cells in spacecraft  
[NASA-CASE-XGS-00886] c03 N71-11053
- Epoxy resin sealing device for electrochemical cells in high vacuum environments  
[NASA-CASE-XGS-02630] c03 N71-22974
- Sealed electrochemical cell with flexible casing for varying electrolyte level in cell  
[NASA-CASE-XGS-01513] c03 N71-23336
- Elimination of two step voltage discharge property of silver zinc batteries by using divalent silver oxide capacity of cell to charge anodes to monovalent silver state  
[NASA-CASE-XGS-01674] c03 N71-29129
- Flexible, frangible electrochemical cell and package for operation in low temperature environment  
[NASA-CASE-XGS-10010] c03 N72-15986
- Porous electrode for use in electrochemical cells  
[NASA-CASE-GSC-11368-1] c09 N73-32108
- Battery testing device --- for testing cells of multiple-cell battery  
[NASA-CASE-MPS-20761-1] c44 N74-27519
- Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c33 N76-19339
- Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c44 N78-14625
- Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c25 N79-22235
- Electrochemical cell for rebalancing REDOX flow system  
[NASA-CASE-LEW-13150-1] c44 N79-26474
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c33 N80-20487
- ELECTROCHEMICAL MACHINING**
- Apparatus for electrolytically tapered or contoured cavities  
[NASA-CASE-XNP-08835-1] c37 N80-14395
- ELECTROCHEMICAL OXIDATION**
- Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c25 N79-22235
- Method for depositing an oxide coating --- producing solar panels  
[NASA-CASE-LEW-13131-1] c26 N81-24230
- ELECTROCHEMISTRY**
- Electrochemically reversible silver-silver chloride electrode for detecting bioelectric potential differences generated by human muscles and organs  
[NASA-CASE-XMS-02872] c05 N69-21925
- Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c25 N79-24073

**ELECTRODE FILM BARRIERS**

Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c44 N79-17313

**ELECTRODEPOSITION**

Binding layer of semiconductor particles by electrodeposition  
[NASA-CASE-XNP-01959] c26 N71-23043  
Electrodeposition method for producing crystalline material from dense gaseous medium  
[NASA-CASE-NFO-10440] c15 N72-21466  
Electrophoretic sample insertion --- device for uniformly distributing samples in flow path  
[NASA-CASE-MFS-21395-1] c25 N74-26548  
Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c37 N75-19684  
Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c25 N79-22235  
Improved refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c26 N80-14232

**ELECTRODES**

Hollow spherical electrode for shielding dielectric junction between high voltage conductor and insulator  
[NASA-CASE-XLF-03778] c09 N69-21542  
Electrochemically reversible silver-silver chloride electrode for detecting bioelectric potential differences generated by human muscles and organs  
[NASA-CASE-XMS-02872] c05 N69-21925  
Bonding method for improving contact between lead telluride thermoelectric elements and tungsten electrodes  
[NASA-CASE-XGS-04554] c15 N69-39786  
Ionization vacuum gage  
[NASA-CASE-XNP-00646] c14 N70-35666  
Accelerated and focus electrode design for ion engine with improved efficiency  
[NASA-CASE-XNP-02839] c28 N70-41922  
Including didymium hydrate in nickel hydroxide of positive electrode of storage batteries to increase ampere hour capacity  
[NASA-CASE-XGS-03505] c03 N71-10608  
Apertured electrode focusing system for ion sources with nonuniform plasma density  
[NASA-CASE-XNP-03332] c09 N71-10618  
Electromedical garment, applying vectorcardiologic type electrodes to human torsos for data recording during physical activity  
[NASA-CASE-XFR-10856] c05 N71-11189  
Electrode attached to helmets for detecting low level signals from skin of living creatures  
[NASA-CASE-ARC-10043-1] c05 N71-11193  
Characteristics of pressed disc electrode for biological measurements  
[NASA-CASE-XMS-04212-1] c05 N71-12346  
Electrode connection for n-on-p silicon solar cell  
[NASA-CASE-XLE-04787] c03 N71-20492  
Arc electrode of graphite with tantalum ball tip  
[NASA-CASE-XLE-04788] c09 N71-22587  
Electrode sealing and insulation for fuel cells containing caustic liquid electrolytes using powdered plastic and metal  
[NASA-CASE-XMS-01625] c15 N71-23022  
Automatic recording McLeod gage with three electrodes and solenoid valve connection  
[NASA-CASE-XLF-03280] c14 N71-23093  
Dry electrode design with wire sandwiched between two flexible conductive discs for monitoring physiological responses  
[NASA-CASE-FBC-10029] c09 N71-24618  
Development and characteristics of electrodes in which poisoning by organic molecules is prevented by ion selective electrolytic deposition of hydrophilic protein colloid  
[NASA-CASE-XMS-04213-1] c09 N71-26002  
Adhesive spray process for attaching biomedical skin electrodes  
[NASA-CASE-XFR-07658-1] c05 N71-26293  
Electrodes having array of small surfaces for field ionization  
[NASA-CASE-ERC-10013] c09 N71-26678  
Manufacturing process for making perspiration resistant-stress resistant biopotential

electrode  
[NASA-CASE-MSC-90153-2] c05 N72-25120  
Dry electrode manufacture, using silver powder with cement  
[NASA-CASE-FBC-10029-2] c05 N72-25121  
Compressible electrolyte saturated sponge electrode for biomedical applications  
[NASA-CASE-MSC-13648] c05 N72-27103  
Electrode with multiple columnar conductors for limiting field emission current  
[NASA-CASE-ERC-10015-2] c10 N72-27246  
Coaxial, high density, hypervelocity plasma generator and accelerator using electrodes  
[NASA-CASE-MFS-20589] c25 N72-32688  
Characteristics of ion rocket engine with combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c28 N73-24783  
Silicon carbide backward diode with coated lead attachment  
[NASA-CASE-ERC-10224-2] c09 N73-27150  
Porous electrode for use in electrochemical cells  
[NASA-CASE-GSC-11368-1] c09 N73-32108  
High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c33 N74-12913  
Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c44 N74-19692  
Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MSC-14339-1] c05 N75-24716  
Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525  
Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c44 N77-22606  
Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c52 N77-28717  
Cesium thermionic converters having improved electrodes  
[NASA-CASE-LEW-12038-3] c44 N78-25555  
Apparatus for electrolytically tapered or contoured cavities  
[NASA-CASE-XNP-08835-1] c37 N80-14395  
Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c44 N81-24521  
Additive for zinc electrodes  
[NASA-CASE-LEW-13286-1] c44 N81-27597  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c44 N81-29524  
**ELECTRODIALYSIS**  
Electrophoresis device  
[NASA-CASE-MFS-25426-1] c25 N81-29179  
**ELECTROFORMING**  
Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c20 N74-32919  
**ELECTROHYDRAULIC FORMING**  
Electric discharge apparatus for electrohydraulic explosive forming  
[NASA-CASE-XMF-00375] c15 N70-34249  
**ELECTROHYDRODYNAMICS**  
Control valve for switching main stream of fluid from one stable position to another by means of electrohydrodynamic forces  
[NASA-CASE-NPO-10416] c12 N71-27332  
**ELECTROKINETICS**  
Zeta potential flowmeter for measuring very slow to very high flows  
[NASA-CASE-XNP-06509] c14 N71-23226  
**ELECTROLYSIS**  
Water electrolysis rocket engine with self-regulating stoichiometric fuel mixing regulator  
[NASA-CASE-XGS-08729] c28 N71-14044  
Operation method for combined electrolysis device and fuel cell using molten salt to produce power by thermoelectric regeneration mechanism  
[NASA-CASE-XLE-01645] c03 N71-20904  
Polymeric electrolytic hygrometer  
[NASA-CASE-NFO-13948-1] c35 N78-25391  
**ELECTROLYTES**  
Apparatus for measuring polymer membrane expansion in electrochemical cells  
[NASA-CASE-XGS-03865] c14 N69-21363

- Electrolytically regenerative hydrogen-oxygen fuel cells  
[NASA-CASE-XLE-04526] c03 N71-11052
- Sealed electrochemical cell with flexible casing for varying electrolyte level in cell  
[NASA-CASE-XGS-01513] c03 N71-23336
- Compressible electrolyte saturated sponge electrode for biomedical applications  
[NASA-CASE-MSC-13648] c05 N72-27103
- An improved solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c33 N81-16385
- ELECTROLYTIC CELLS**
- Heat activated cell with aluminum anode  
[NASA-CASE-LEW-11359-2] c03 N72-20034
- Actuator operated by electrolytic drive gas generator and evacuator  
[NASA-CASE-NPO-11369] c15 N73-13467
- Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c33 N75-27252
- Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MSC-12568-1] c24 N76-14204
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c33 N80-20487
- An improved solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c33 N81-16385
- Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c28 N81-24280
- Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c44 N81-24521
- ELECTROMAGNETIC ABSORPTION**
- Optical imaging system for increasing light absorption efficiency of imaging detector  
[NASA-CASE-ARC-10194-1] c23 N73-20741
- Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c35 N77-14411
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c32 N79-19186
- Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c32 N80-14281
- ELECTROMAGNETIC FIELDS**
- Tumbling motion system for object demagnetization  
[NASA-CASE-XGS-02437] c15 N69-21472
- Device for high vacuum film deposition with electromagnetic ion steering  
[NASA-CASE-NPO-10331] c09 N71-26701
- Metal detection system with electromagnetic transmitter with single coil and receiver with single coil  
[NASA-CASE-ARC-10265-1] c10 N72-28240
- Low power electromagnetic flowmeter system producing zero output signal for zero flow  
[NASA-CASE-ARC-10362-1] c14 N73-32326
- Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c35 N74-21018
- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411
- ELECTROMAGNETIC HAMMERS**
- Method and apparatus for shaping and joining large diameter metal tubes using magnetomotive forces  
[NASA-CASE-XMF-05114] c15 N71-17650
- Portable magnetomotive hammer for metal working  
[NASA-CASE-XMF-03793] c15 N71-24833
- ELECTROMAGNETIC INTERFERENCE**
- Sealed housing for protecting electronic equipment against electromagnetic interference  
[NASA-CASE-MSC-12168-1] c09 N71-18603
- Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c27 N77-32308
- ELECTROMAGNETIC MEASUREMENT**
- Apparatus for measuring backscatter and transmission characteristics of sample segment of large spherical passive satellites  
[NASA-CASE-XGS-02608] c07 N70-41678
- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411
- ELECTROMAGNETIC NOISE**
- Development of idler feedback system to reduce electronic noise problem in two parametric amplifiers  
[NASA-CASE-LAR-10253-1] c09 N72-25258
- Audio equipment for removing impulse noise from audio signals  
[NASA-CASE-NPO-11631] c10 N73-12244
- Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MPS-22729-1] c32 N76-21366
- ELECTROMAGNETIC PROPULSION**
- Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c09 N79-21084
- ELECTROMAGNETIC PUMPS**
- Multiducted electromagnetic pump for conductive liquids  
[NASA-CASE-NPO-10755] c15 N71-27084
- ELECTROMAGNETIC RADIATION**
- Inflatable radar reflector unit - lightweight, highly reflective to electromagnetic radiation, and adaptable for erection and deployment with minimum effort and time  
[NASA-CASE-XMS-00893] c07 N70-40063
- Development of electromagnetic wave transmission line circulator and application to parametric amplifier circuits  
[NASA-CASE-XNF-02140] c09 N71-23097
- Left and right hand circular electromagnetic polarization excitation by phase shifter and hybrid networks  
[NASA-CASE-GSC-10021-1] c09 N71-24595
- Development of method for suppressing excitation of electromagnetic surface waves on dielectric converter antenna  
[NASA-CASE-XLA-10772] c07 N71-28980
- Characteristics of microwave antenna with conical reflectors to generate plane wave front  
[NASA-CASE-NPO-11661] c07 N73-14130
- Method and apparatus for measuring electromagnetic radiation  
[NASA-CASE-LEW-11159-1] c14 N73-28488
- ELECTROMAGNETIC SHIELDING**
- Shielded flat conductor cable fabricated by electroless and electrolytic plating  
[NASA-CASE-MPS-13687] c09 N71-28691
- Wire stripper  
[NASA-CASE-PRC-10111-1] c37 N79-10419
- Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c33 N81-27397
- ELECTROMAGNETIC WAVE FILTERS**
- Design and characteristics of laser camera system with diffusion filter of small particles with average diameter larger than wavelength of laser light  
[NASA-CASE-NFC-10417] c16 N71-33410
- ELECTROMAGNETIC WAVE TRANSMISSION**
- Apparatus for measuring backscatter and transmission characteristics of sample segment of large spherical passive satellites  
[NASA-CASE-XGS-02608] c07 N70-41678
- Gyrottron transmitting tube  
[NASA-CASE-LEW-13429-1] c33 N81-16384
- ELECTROMAGNETISM**
- Electromagnetic braking arrangement for controlling rotor rotation in electric motor  
[NASA-CASE-XNF-06936] c15 N71-24695
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c33 N81-22279
- ELECTROMAGNETS**
- Oscillatory electromagnetic mirror drive system for horizon scanners  
[NASA-CASE-XLA-03724] c14 N69-27461
- Water cooled solenoid capable of producing magnetic field intensities up to 100 kilogauss  
[NASA-CASE-XNF-01951] c09 N70-41929
- Magnetic element position sensing device, using misaligned electromagnets  
[NASA-CASE-XGS-07514] c23 N71-16099
- Electroexplosive safe-arm initiator using electric driven electromagnetic coils and magnets to align charge  
[NASA-CASE-LAR-10372] c09 N71-18599
- Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c37 N75-18574
- Linear magnetic bearings --- active magnetic suspension of armatures  
[NASA-CASE-GSC-12582-1] c37 N81-16469
- ELECTROMECHANICAL DEVICES**
- Electromechanical actuator and its use in rocket

- thrust control valve  
[NASA-CASE-XNP-05975] c15 N69-23185
- Power controlled bimetallic electromechanical actuator for accurate, timely, and reliable response to remote control signal  
[NASA-CASE-XNP-09776] c09 N69-39929
- Electro-mechanical circuit for converting floating intelligence signal to common electrically grounded intelligence recorder  
[NASA-CASE-XAC-00086] c09 N70-33182
- Describing device for velocity control of electromechanical drive mechanism of scanning mirror of interferometer  
[NASA-CASE-XGS-03532] c14 N71-17627
- Mechanical actuator wherein linear motion changes to rotational motion  
[NASA-CASE-XGS-04548] c15 N71-24045
- Solid state force measuring electromechanical transducers made of piezoresistive materials  
[NASA-CASE-ERC-10088] c26 N71-25490
- Electromechanical control actuator system using double differential screws  
[NASA-CASE-ERC-10022] c15 N71-26635
- Miniature electromechanical junction transducer operating on piezofunction effect and utilizing epoxy for stress coupling component  
[NASA-CASE-ERC-10087] c14 N71-27334
- Service life of electromechanical device for generating sine/cosine functions  
[NASA-CASE-LAR-10503-1] c09 N72-21248
- Electromechanical actuator for producing mechanical force and/or motion in response to electrical signals  
[NASA-CASE-NPO-11738-1] c09 N73-30185
- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c33 N77-26387
- Rotary electric device  
[NASA-CASE-GSC-12138-1] c33 N79-20314
- Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c43 N80-14423
- Magnetic field control --- electromechanical torquing devices  
[NASA-CASE-MFS-23828-1] c33 N80-17359
- Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c43 N80-23711
- ELECTROMETERS**  
Vibrating element electrometer producing high conversion gain by input current control of elements resonant frequency displacement amplitude  
[NASA-CASE-XAC-02807] c09 N71-23021
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c35 N81-12389
- ELECTROMIGRATION**  
Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c76 N81-19544
- ELECTROMOTIVE FORCES**  
Heat activated emf cells with aluminum anode  
[NASA-CASE-LEW-11359] c03 N71-28579
- ELECTRON ATTACHMENT**  
High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c72 N80-14877
- ELECTRON BEAM WELDING**  
Portable electron beam welding chamber  
[NASA-CASE-LEW-11531] c15 N71-14932
- Development of device to prevent high voltage arcing in electron beam welding  
[NASA-CASE-XMP-08522] c15 N71-19486
- ELECTRON BEAMS**  
Using electron beam switching for brushless motor commutation  
[NASA-CASE-XGS-01451] c09 N71-10677
- Electron beam scanning system for improved image definition and reduced power requirements for video signal transmission  
[NASA-CASE-ERC-10552] c09 N71-12539
- Electron beam deflection devices for measuring electric fields  
[NASA-CASE-XMP-10289] c14 N71-23699
- Apparatus to determine electric field strength by measuring deflection of electron beam impinging on target  
[NASA-CASE-XMP-06617] c09 N71-24843
- Characteristics of infrared photodetectors manufactured from semiconductor material irradiated by electron beam  
[NASA-CASE-LAR-10728-1] c14 N73-12445
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c33 N74-10195
- Image tube --- deriving electron beam replica of image  
[NASA-CASE-GSC-11602-1] c33 N74-21850
- Very high intensity light source using a cathode ray tube --- electron beams  
[NASA-CASE-XNF-01296] c33 N75-27250
- Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c33 N80-19425
- A low energy electron magnetometer  
[NASA-CASE-LAR-12706-1] c35 N81-19428
- ELECTRON BOMBARDMENT**  
Improved cathode containing barium carbonate block and heated tungsten screen for electron bombardment ion thruster  
[NASA-CASE-XLE-07087] c06 N69-39889
- Device and method for particle bombardment of specimens in electron microscope and measurement of beam intensities  
[NASA-CASE-XGS-01725] c14 N69-39982
- Electric rocket engine with electron bombardment ionization chamber  
[NASA-CASE-XNP-04124] c28 N71-21822
- Electronic cathodes for use in electron bombardment ion thrusters  
[NASA-CASE-XLE-04501] c09 N71-23190
- Single grid accelerator system for electron bombardment type ion thruster  
[NASA-CASE-XLE-10453-2] c28 N73-27699
- Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c35 N81-19426
- ELECTRON DISTRIBUTION**  
Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c75 N74-30156
- ELECTRON EMISSION**  
Vacuum thermionic converter with short-circuited triodes and increased electron transmission and conversion efficiency  
[NASA-CASE-XLE-01015] c03 N69-39898
- ELECTRON FLUX DENSITY**  
Device and method for particle bombardment of specimens in electron microscope and measurement of beam intensities  
[NASA-CASE-XGS-01725] c14 N69-39982
- ELECTRON IRRADIATION**  
Electrostatic ion engines using high velocity electrons to ionize propellant  
[NASA-CASE-XLE-00376] c28 N70-37245
- ELECTRON MICROSCOPES**  
Device and method for particle bombardment of specimens in electron microscope and measurement of beam intensities  
[NASA-CASE-XGS-01725] c14 N69-39982
- Method of forming aperture plate for electron microscope  
[NASA-CASE-ARC-10448-2] c74 N75-12732
- Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c35 N77-14408
- ELECTRON PHOTON CASCADES**  
Resistive anode image converter  
[NASA-CASE-HCN-10876-1] c33 N76-27473
- ELECTRON FLASH**  
Apparatus for producing highly conductive, high temperature electron plasma with homogenous temperature and pressure distribution  
[NASA-CASE-XLA-00147] c25 N70-34661
- ELECTRON SOURCES**  
Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c35 N77-14408
- ELECTRON TRANSFER**  
Method for treating metal surfaces to prevent secondary electron transmission  
[NASA-CASE-XNP-09469] c24 N71-25555
- ELECTRON TRANSITIONS**  
Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c36 N75-31426
- ELECTRON TUBES**  
Direct radiation cooling of linear beam collector tubes  
[NASA-CASE-XNP-09227] c15 N69-24319
- Refractory filament series circuitry for radiant heater



[NASA-CASE-XLE-00387] c33 N70-34612  
 Gyrotron transmitting tube  
 [NASA-CASE-LEW-13429-1] c33 N81-16384  
 Ion sputter textured graphite --- applications  
 to electron tube devices  
 [NASA-CASE-LEW-12919-1] c24 N81-27198

**ELECTRON TUNNELING**  
 Doped Josephson tunneling junction for use in a  
 sensitive IR detector  
 [NASA-CASE-NFO-13348-1] c33 N75-31332

**ELECTRONIC CONTROL**  
 Electronic and mechanical scanning control  
 system for monopulse tracking antenna  
 [NASA-CASE-XGS-05582] cC7 N69-27460  
 Electronic circuit system for controlling  
 electric motor speed  
 [NASA-CASE-XMF-01129] cC9 N70-36712  
 Scanning signal phase and amplitude electronic  
 control device with hybrid T waveguide junction  
 [NASA-CASE-NFO-10302] c10 N71-26142  
 Ion beam deflector system for electronic thrust  
 vector control for ion propulsion yaw, pitch,  
 and roll forces  
 [NASA-CASE-LEW-10689-1] c28 N71-26173  
 Electronic detection system for peak  
 acceleration limits in vibrational testing of  
 spacecraft components  
 [NASA-CASE-NPO-10556] c14 N71-27185  
 Control and information system for digital  
 telemetry data using analog converter to  
 digitize sensed parameter values  
 [NASA-CASE-NPO-11016] cC8 N72-31226

**ELECTRONIC EQUIPMENT**  
 Electronic and mechanical scanning control  
 system for monopulse tracking antenna  
 [NASA-CASE-XGS-05582] cC7 N69-27460  
 Development of pulse-activated polarographic  
 hydrogen detector  
 [NASA-CASE-XMF-06531] c14 N71-17575  
 Development of stable electronic amplifier  
 adaptable for monolithic and thin film  
 construction  
 [NASA-CASE-XGS-02812] cC9 N71-19466  
 Development and characteristics of oscillating  
 static inverter  
 [NASA-CASE-XGS-05289] cC9 N71-19470  
 Development of electromagnetic wave transmission  
 line circulator and application to parametric  
 amplifier circuits  
 [NASA-CASE-XNP-02140] cC9 N71-23057  
 Development of optimum pre-detection diversity  
 combining receiving system adapted for use  
 with amplitude modulation, phase modulation,  
 and frequency modulation systems  
 [NASA-CASE-XGS-00740] cC7 N71-23098  
 Electronic cathodes for use in electron  
 bombardment ion thrusters  
 [NASA-CASE-XLE-04501] cC9 N71-23190  
 Method and apparatus for adjusting thermal  
 conductance in electronic components for space  
 use  
 [NASA-CASE-XNP-05524] c33 N71-24876  
 Development and characteristics of solid state  
 acoustic variable time delay line using direct  
 current voltage and radio frequency pulses  
 [NASA-CASE-ERC-10032] c10 N71-25900  
 Voltage range selection apparatus for sensing  
 and applying voltages to electronic  
 instruments without loading signal source.  
 [NASA-CASE-XMS-06497] c14 N71-26244  
 Digital sensor for counting fringes produced by  
 interferometers with improved sensitivity and  
 one photomultiplier tube to eliminate  
 alignment problem  
 [NASA-CASE-LAR-10204] c14 N71-27215  
 Device for rapid adjustment and maintenance of  
 temperature in electronic components  
 [NASA-CASE-XNP-02792] c14 N71-28958  
 Apparatus with summing network for compression  
 of analog data by decreasing slope threshold  
 sampling  
 [NASA-CASE-NPO-10769] cC8 N72-11171  
 Readily assembled universal environment housing  
 for electronic equipment  
 [NASA-CASE-KSC-10031] c15 N72-22486  
 Lead attachment for high temperature operation  
 of electronic devices  
 [NASA-CASE-ERC-10224] cC9 N72-25261

Development of method and apparatus for  
 detecting surface ions on silicon diodes and  
 transistors  
 [NASA-CASE-ERC-10325] c15 N72-25457  
 Development and characteristics of data decoder  
 to process convolution encoded information  
 [NASA-CASE-NFO-11371] cC8 N73-12177  
 Characteristics of digital data processor using  
 pulse from clock source to derive binary  
 singles to show state of various indicators in  
 processor  
 [NASA-CASE-GSC-10975-1] cC8 N73-13187  
 Thermochromic compositions for detecting heat  
 levels in electronic circuits and devices  
 [NASA-CASE-NPO-10764-1] c14 N73-14428  
 Development of phase control coupling for use  
 with phased array antenna  
 [NASA-CASE-ERC-10285] c10 N73-16206  
 Device for locating electrically nonlinear  
 objects and determining distance to object by  
 FM signal transmission  
 [NASA-CASE-KSC-10108] c14 N73-25461  
 Electronic strain level counter on in-flight  
 aircraft  
 [NASA-CASE-LAR-10756-1] c32 N73-26910  
 Automatic vehicle location system  
 [NASA-CASE-NPO-11850-1] c32 N74-12912  
 Automatic focus control for facsimile cameras  
 [NASA-CASE-LAR-11213-1] c35 N75-15014  
 Electronic analog divider  
 [NASA-CASE-LEW-11881-1] c33 N77-17354

**ELECTRONIC EQUIPMENT TESTS**  
 Apparatus for automatically testing analog to  
 digital converters for open and short circuits  
 [NASA-CASE-XLA-06713] c14 N71-28991  
 Signal conditioner test set  
 [NASA-CASE-KSC-10750-1] c35 N75-12270  
 Decommulator patchboard verifier  
 [NASA-CASE-KSC-11065-1] c33 N81-26359

**ELECTRONIC FILTERS**  
 Self-tuning electronic filter for maintaining  
 constant bandwidth and center frequency gain  
 [NASA-CASE-ARC-10264-1] cC9 N73-20231  
 Capacitance multiplier and filter synthesizing  
 network  
 [NASA-CASE-NPO-11948-1] c33 N74-32712  
 Notch filter  
 [NASA-CASE-MPS-23303-1] c32 N77-18307

**ELECTRONIC MODULES**  
 Thermal conductive, electrically insulated  
 cleavable adhesive connection between  
 electronic module and heat sink  
 [NASA-CASE-XMS-02087] cC9 N70-41717  
 Fabrication methods for matrices of solar cell  
 submodules  
 [NASA-CASE-XNP-05821] cC3 N71-11056  
 Development and characteristics of cooling  
 system to maintain temperature of rack mounted  
 electronic modules  
 [NASA-CASE-MSC-12389] c33 N71-29052  
 Tool for use in lifting pin supported objects  
 [NASA-CASE-NFO-13157-1] c37 N74-32918  
 Phase substitution of spare converter for a  
 failed one of parallel phase staggered  
 converters  
 [NASA-CASE-NFO-13812-1] c33 N77-30365  
 Method of making encapsulated solar cell modules  
 [NASA-CASE-LEW-12185-1] c44 N78-25528  
 Electronically scanned pressure sensor module  
 with in SITU calibration capability  
 [NASA-CASE-LAR-12230-1] c35 N79-14347  
 Module failure isolation circuit for paralleled  
 inverters --- preventing system failure during  
 power conditioning for spacecraft applications  
 [NASA-CASE-NFO-14000-1] c33 N79-24254  
 Circuit for automatic load sharing in parallel  
 converter modules  
 [NASA-CASE-NFO-14056-1] c33 N79-24257  
 Method and apparatus for fabricating improved  
 solar cell modules  
 [NASA-CASE-NPC-14416-1] c44 N81-14389  
 Redundant operation of counter modules  
 [NASA-CASE-NPO-14162-1] cC60 N81-15706

**ELECTRONIC PACKAGING**  
 Electrical feedthrough connection for printed  
 circuit boards  
 [NASA-CASE-XMF-01483] c14 N69-27431  
 Capacitor fabrication by solidifying mixture of  
 ferromagnetic metal particles,

- nonferromagnetic particles, and dielectric material  
[NASA-CASE-LEW-10364-1] c09 N71-13522
- Method of evaluating moisture barrier properties of materials used in electronics encapsulation  
[NASA-CASE-NPO-10051] c18 N71-24934
- Electrical connections for thin film hybrid microcircuits  
[NASA-CASE-XMS-02182] c10 N71-28783
- Flexible, frangible electrochemical cell and package for operation in low temperature environment  
[NASA-CASE-XGS-10010] c03 N72-15986
- Development and characteristics of hermetically sealed coaxial package for containing microwave semiconductor components  
[NASA-CASE-GSC-10791-1] c15 N73-14469
- Techniques for packaging and mounting printed circuit boards  
[NASA-CASE-MFS-21919-1] c10 N73-25243
- Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c33 N74-12951
- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c37 N74-32918
- Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c37 N79-33467
- ELECTRONIC RECORDING SYSTEMS**
- Electronic recording system for spatial mass distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NPO-10185] c10 N71-26339
- A self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12686-1] c09 N81-27121
- ELECTRONIC TRANSDUCERS**
- Fiber optic transducers for monitoring and analysis of vibration in aerospace vehicles and onboard equipment  
[NASA-CASE-XMF-02433] c14 N71-10616
- Transducer circuit design with single coaxial cable for input and output connections including incorporation into miniaturized catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597
- Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
[NASA-CASE-GSC-10114-1] c10 N71-27366
- Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c35 N77-21392
- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c35 N80-18359
- ELECTROPHORESIS**
- Electrophoretic sample insertion --- device for uniformly distributing samples in flow path  
[NASA-CASE-MFS-21395-1] c25 N74-26948
- Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c34 N74-27744
- Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c25 N78-14104
- Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c25 N79-10163
- Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c25 N79-14169
- Electrophoretic fractional elution apparatus employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c37 N80-14397
- Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c51 N80-16715
- Electrophoresis device  
[NASA-CASE-MFS-25426-1] c25 N81-29179
- Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c25 N82-11147
- ELECTROPHOTOMETERS**
- Method and photodetector device for locating abnormal voids in low density materials  
[NASA-CASE-MFS-20044] c14 N71-28993
- ELECTROPHYSIOLOGY**
- Dry electrode design with wire sandwiched between two flexible conductive discs for monitoring physiological responses  
[NASA-CASE-FRC-10029] c09 N71-24618
- ELECTROPLATING**
- Method of plating copper on aluminum to permit conventional soldering of structural aluminum bodies  
[NASA-CASE-XLA-08966-1] c17 N71-25903
- Shielded flat conductor cable fabricated by electroless and electrolytic plating  
[NASA-CASE-MFS-13687] c09 N71-28691
- Technique and equipment for sputtering using apertured electrode and pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c17 N73-24569
- Method for depositing an oxide coating --- producing solar panels  
[NASA-CASE-LEW-13131-1] c26 N81-24230
- Method of forming oxide coatings  
[NASA-CASE-LEW-13132-1] c44 N81-27616
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c44 N81-29524
- ELECTROSTATIC CHARGE**
- Charged particle analyzer with periodically varying voltage applied across electrostatic deflection members  
[NASA-CASE-XAC-05506-1] c24 N71-16095
- Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-MFS-22129-1] c33 N75-18477
- ELECTROSTATIC ENGINES**
- Colloidal particle generator for electrostatic engine for propelling space vehicles  
[NASA-CASE-XLE-00817] c28 N70-33265
- Encapsulated heater forming hollow body for cathode used in ion thruster  
[NASA-CASE-LEW-10814-1] c28 N70-35422
- Electrostatic ion engines using high velocity electrons to ionize propellant  
[NASA-CASE-XLE-00376] c28 N70-37245
- Electron bombardment ion rocket engine with improved propellant introduction system  
[NASA-CASE-XLE-02066] c28 N71-15661
- ELECTROSTATIC GENERATORS**
- Electrostatic modulator for communicating through plasma sheath formed around spacecraft during reentry  
[NASA-CASE-XLA-01400] c07 N70-41331
- ELECTROSTATIC PRECIPITATORS**
- Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c35 N79-17192
- Small conductive particle sensor --- microfiber size determination  
[NASA-CASE-LAR-12552-1] c35 N82-11431
- ELECTROSTATIC PROBES**
- Low impedance apparatus for measuring electrostatic field intensity near space vehicles  
[NASA-CASE-XLE-00820] c14 N71-16014
- ELECTROSTATIC PROPULSION**
- High voltage insulators for direct current in acceleration system of electrostatic thruster  
[NASA-CASE-XLE-01902] c28 N71-10574
- Electrostatic microthrust propulsion system with annular slit colloid thruster  
[NASA-CASE-GSC-10709-1] c28 N71-25213
- ELECTROSTATIC SHIELDING**
- Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c20 N77-10148
- Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c33 N81-27397
- ELECTROSTATICS**
- Controllable high voltage source having fast settling time  
[NASA-CASE-GSC-11844-1] c33 N75-19522
- ELECTROTHERMAL ENGINES**
- Electrothermal rocket engine using resistance heated heat exchanger  
[NASA-CASE-XLE-00267] c28 N70-33356
- High resistance cross flow heat exchangers for electrothermal rocket engines  
[NASA-CASE-XLE-01783] c28 N70-34175
- ELEVATION**
- Tracking mount for laser telescope employed in tracking large rockets and space vehicles to give information regarding azimuth and elevation  
[NASA-CASE-MFS-14017] c14 N71-26627
- Automatic braking device for rapidly transferring humans or materials from elevated location  
[NASA-CASE-XKS-07814] c15 N71-27067

## ELEVATORS (LIFTS)

Centrifuge mounted motion simulator with  
elevator mechanism  
[NASA-CASE-XAC-00399] c11 N70-34615  
Guide member for stabilizing cable of open shaft  
elevator  
[NASA-CASE-KSC-10513] c15 N72-25453

## ELEVONS

Supersonic or hypersonic vehicle control system  
comprising elevons with hinge line sweep and  
free of adverse aerodynamic cross coupling  
[NASA-CASE-XLA-08967] c02 N71-27688

## ELLIPSES

Ellipsograph for describing and cutting ellipses  
with minimal axial dimensions  
[NASA-CASE-XLA-03102] c14 N71-21079

## ELLIPSOIDMETERS

Remote sensing of vegetation and soil using  
microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c43 N78-10529

## ELONGATION

Strain gage measurement of elongation due to  
thermally and mechanically induced stresses  
[NASA-CASE-XGS-04478] c14 N71-24233  
Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c35 N77-22449

## ELUTION

Amino acid analysis  
[NASA-CASE-NFO-12130-1] c25 N75-14844  
Electrophoretic fractional elution apparatus  
employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c37 N80-14397

## EMERGENCIES

Silent alarm system for multiple roca facility or  
school  
[NASA-CASE-NPO-11307-1] c10 N73-30205  
Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c54 N78-18761

## EMERGENCY BREATHING TECHNIQUES

Pulmonary resuscitation method and apparatus  
with adjustable pressure regulator  
[NASA-CASE-XMS-01115] c05 N70-35922

## EMERGENCY LIFE SUSTAINING SYSTEMS

Development and characteristics of inflatable  
structure to provide escape from orbit for  
spacecrews under emergency conditions  
[NASA-CASE-XMS-06162] c31 N71-28851  
Three transceiver lunar emergency system to  
relay voice communication of astronaut  
[NASA-CASE-MFS-21042] c07 N72-25171  
Emergency descent device  
[NASA-CASE-MFS-23074-1] c54 N77-21844

## EMISSION SPECTRA

Emission spectroscopy method for contamination  
monitoring of inert gas metal arc welding  
[NASA-CASE-XMF-02039] c15 N71-15871

## EMITTANCE

High thermal emittance black surface coatings  
and process for applying to metal and metal  
alloy surfaces used in radiative cooling of  
spacecraft  
[NASA-CASE-XLA-06199] c15 N71-24875

## EMITTERS

Inverted geometry transistor for use with  
monolithic integrated circuit  
[NASA-CASE-ARC-10330-1] c09 N73-32112

## EMULSIONS

Apparatus for obtaining isotropic irradiation on  
film emulsion from parallel radiation source  
[NASA-CASE-MFS-20095] c24 N72-11595

## ENAMELS

Refractory porcelain enamel passive control  
coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c27 N75-27160

## ENCAPSULATING

Development of bacteriostatic conformal coating  
and methods of application  
[NASA-CASE-GSC-10007] c18 N71-16046  
Flexible, repairable, portable composition for  
encapsulating electric connectors  
[NASA-CASE-XGS-05180] c18 N71-25881  
Test chambers with orifice and helium mass  
spectrometer for detecting leak rate of  
encapsulated semiconductor devices  
[NASA-CASE-ERC-10150] c14 N71-28992  
Electrically coupled individually encapsulated  
solar cell matrix  
[NASA-CASE-NFO-11190] c03 N71-34044

Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c44 N78-25528  
Method and system for nuclear waste disposal ---  
control valves for encapsulating wastes  
[NASA-CASE-NFO-15454-1] c73 N82-12916

## ENCLOSURES

Method and apparatus for bowing of instrument  
panels to improve radio frequency shielded  
enclosure  
[NASA-CASE-XMF-09422] c07 N71-19436  
Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c37 N79-13364

## ENDOSCOPES

Borescope with adjustable hinged telescoping  
optical system  
[NASA-CASE-MFS-15162] c14 N72-32452  
Apparatus for endoscopic examination ---  
analysis of the propulsion system  
configuration and transmitter  
[NASA-CASE-NFO-14092-1] c52 N80-16725

## ENDOTHERMIC REACTIONS

Sensor device with switches for measuring  
surface recession of charring and noncharring  
ablaters  
[NASA-CASE-XLA-01781] c14 N69-39975

## ENEMY PERSONNEL

Development of electronic detection system for  
remotely determining number and movement of  
enemy personnel  
[NASA-CASE-ARC-10097-2] c07 N73-25160

## ENERGY ABSORPTION

Non-reusable kinetic energy absorber for  
application in soft landing of space vehicles  
[NASA-CASE-XLE-00810] c15 N70-34861  
Low onset rate energy absorber in form of strut  
assembly for crew couch of Apollo command module  
[NASA-CASE-MSC-12279-1] c15 N70-35679  
Air brake device for absorbing and measuring  
power from rotating shafts  
[NASA-CASE-XLF-00720] c14 N70-40201  
Design and development of double acting shock  
absorber for spacecraft docking operations  
[NASA-CASE-XMS-03722] c15 N71-21530  
Nonreusable energy absorbing device comprising  
ring member with plurality of recesses,  
cutting members, and guide member mounted in  
each recess  
[NASA-CASE-XMF-10040] c15 N71-22877  
Suspended mass oscillation damper based on  
impact energy absorption for damping wind  
induced oscillations of tall stacks, antennas,  
and umbilical towers  
[NASA-CASE-LAR-10193-1] c15 N71-27146  
Energy absorption device in high precision gear  
train for protection against damage to  
components caused by stop loads  
[NASA-CASE-XNF-01848] c15 N71-28959  
Shock absorber for use as protective barrier in  
impact energy absorbing system  
[NASA-CASE-NFO-10671] c15 N72-20443  
High energy absorption docking system design for  
docking large spacecraft  
[NASA-CASE-MFS-20863] c31 N73-26876  
Metal shearing energy absorber  
[NASA-CASE-HQN-10638-1] c15 N73-30460

## ENERGY CONSERVATION

Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c15 N75-13007  
A simplified power factor controller with  
increased energy saving circuit  
[NASA-CASE-MFS-25323-1] c33 N82-12349

## ENERGY CONVERSION

Thermoelectric power conversion by liquid metal  
flowing through magnetic field  
[NASA-CASE-XNP-00644] c03 N70-36803  
Concentrator device for controlling direction of  
solar energy onto energy converters  
[NASA-CASE-XLF-01716] c09 N70-40234  
Device for converting electromagnetic wave  
energy into electric power  
[NASA-CASE-GSC-11394-1] c09 N73-32109  
Electric power generation system directory from  
laser power  
[NASA-CASE-NFC-13308-1] c36 N75-30524  
Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c37 N77-12402  
Low to high temperature energy conversion system  
[NASA-CASE-NFO-13510-1] c44 N77-32581

- Solar energy collection system  
[NASA-CASE-NPO-13810-1] c44 N77-32582
- Microwave power converter  
[NASA-CASE-NPO-14068-1] c44 N78-19609
- ENERGY CONVERSION EFFICIENCY**
- Vacuum thermionic converter with short-circuited triodes and increased electron transmission and conversion efficiency  
[NASA-CASE-XLE-01015] c03 N69-39898
- Direct conversion of thermal energy into electrical energy using crossed electric and magnetic fields  
[NASA-CASE-XLE-00212] c03 N70-34134
- Increasing power conversion efficiency of electronic amplifiers by power supply switching  
[NASA-CASE-XMS-00945] c09 N71-10798
- Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c44 N78-24608
- Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c44 N79-26475
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c44 N80-14472
- Improving the efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c44 N80-32850
- ENERGY DISSIPATION**
- Energy dissipating shock absorbing system for land payload recovery or vehicle braking  
[NASA-CASE-XLA-00754] c15 N70-34850
- Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c02 N77-10001
- Motion restraining device  
[NASA-CASE-NPO-13619-1] c37 N78-16369
- ENERGY DISTRIBUTION**
- Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c76 N76-20994
- ENERGY LEVELS**
- High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c72 N80-14877
- A low energy electron magnetometer  
[NASA-CASE-LAR-12706-1] c35 N81-19428
- ENERGY POLICY**
- Solar energy power system  
[NASA-CASE-MFS-21628-2] c44 N76-23675
- Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c44 N76-31667
- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c35 N77-20401
- Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c74 N77-28933
- Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c44 N77-32580
- Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c44 N78-19599
- Microwave power converter  
[NASA-CASE-NPO-14068-1] c44 N78-19609
- Solar pond  
[NASA-CASE-NPO-13581-2] c44 N78-31525
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c44 N78-31526
- Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c44 N78-31527
- Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c44 N79-14529
- Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c44 N79-24432
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c44 N79-24433
- Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c44 N80-20810
- Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c44 N80-21828
- Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c44 N80-29835
- Solar power satellite system  
[NASA-CASE-HQN-10949-1] c44 N81-16530
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c44 N81-17518
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NFC-14670-1] c44 N81-19558
- Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NFC-15767-1] c28 N82-12241
- ENERGY SOURCES**
- Pulse generator for synchronizing or resetting electronic signals without requiring separate external source  
[NASA-CASE-XGS-03632] c09 N71-23311
- Controllable high voltage source having fast settling time  
[NASA-CASE-GSC-11844-1] c33 N75-19522
- Wingtip vortex turbine  
[NASA-CASE-LAR-12544-1] c07 N81-27096
- ENERGY STORAGE**
- Switching mechanism with energy stored in coil spring  
[NASA-CASE-XGS-00473] c03 N70-38713
- Stored charge transistor  
[NASA-CASE-NPO-11156-2] c33 N75-31331
- Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c52 N78-10686
- Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c44 N78-24608
- Rotatable mass for a flywheel  
[NASA-CASE-APS-23051-1] c37 N79-10422
- Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c44 N80-20810
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c28 N81-14103
- ENERGY TECHNOLOGY**
- Solar energy collection system  
[NASA-CASE-NPO-13810-1] c44 N77-32582
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c44 N78-25529
- Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c44 N78-33526
- Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c25 N79-11152
- Back wall solar cell  
[NASA-CASE-LEW-12236-2] c44 N79-14528
- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c44 N79-19447
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c44 N79-24433
- Solar concentrator  
[NASA-CASE-MFS-23727-1] c44 N80-14473
- Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c44 N80-14474
- ENERGY TRANSFER**
- Solar energy absorber  
[NASA-CASE-MFS-22743-1] c44 N76-22657
- ENGINE ANALYZERS**
- Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c35 N79-14345
- ENGINE CONTROL**
- Direct current electromotive system for regenerative braking of electric motor  
[NASA-CASE-XMF-01096] c10 N71-16030
- Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c05 N75-12930
- Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c37 N81-14318
- Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c07 N81-19115
- ENGINE COOLANTS**
- Apparatus for cooling and injecting hypergolic propellants into combustion chamber of small rocket engine  
[NASA-CASE-XLE-00303] c15 N70-36535
- Injector manifold assembly for bipropellant rocket engines providing for fuel propellant to serve as coolant  
[NASA-CASE-XMF-00148] c28 N70-38710
- ENGINE DESIGN**
- Design and development of gas turbine combustion unit with nozzle guide vanes for introducing diluent air into combustion gases  
[NASA-CASE-XLE-103477-1] c28 N71-20330
- Construction and method of arranging plurality of ion engines to form cluster thereby increasing efficiency and control by decreasing heat radiated to space

[NASA-CASE-XNP-02923] c26 N71-23081  
 Space vehicle system  
 [NASA-CASE-MSC-12561-1] c18 N76-17185  
 Noise suppressor for turbo fan jet engines  
 [NASA-CASE-ARC-10812-1] c07 N76-18131  
 Solid propellant motor  
 [NASA-CASE-NFO-11458A] c20 N78-32179  
 Hydrogen-fueled engine  
 [NASA-CASE-NPO-13763-1] c44 N78-33526  
 Method and apparatus for rapid thrust increases  
 in a turbofan engine  
 [NASA-CASE-LEW-12971-1] c07 N80-18039  
 Free-piston regenerative hot gas hydraulic engine  
 [NASA-CASE-LEW-12274-1] c37 N80-31790  
 Phase-angle controller for Stirling engines  
 [NASA-CASE-NPO-14388-1] c37 N81-17432  
 Hot gas engine with dual crankshafts  
 [NASA-CASE-NPO-14221-1] c37 N81-25370  
**ENGINE FAILURE**  
 System for monitoring presence of neutrals in  
 streams of ions - ion engine control  
 [NASA-CASE-XNP-02592] c24 N71-20518  
**ENGINE INLETS**  
 Variably positioned guide vanes for aerodynamic  
 choking  
 [NASA-CASE-LAR-10642-1] c07 N74-31270  
 The engine air intake system  
 [NASA-CASE-ARC-10761-1] c07 N77-18154  
 Self stabilizing sonic inlet  
 [NASA-CASE-LEW-11890-1] c05 N79-24976  
**ENGINE MONITORING INSTRUMENTS**  
 System for monitoring presence of neutrals in  
 streams of ions - ion engine control  
 [NASA-CASE-XNP-02592] c24 N71-20518  
**ENGINE NOISE**  
 Variably positioned guide vanes for aerodynamic  
 choking  
 [NASA-CASE-LAR-10642-1] c07 N74-31270  
 Variable thrust nozzle for quiet turbofan engine  
 and method of operating same  
 [NASA-CASE-LEW-12317-1] c07 N78-17055  
**ENGINE PARTS**  
 Gas turbine engine with convertible accessories  
 [NASA-CASE-LEW-12390-1] c07 N78-17056  
 Gas path seal  
 [NASA-CASE-NPO-12131-3] c37 N80-18400  
 Heat pipes to reduce engine exhaust  
 emissions  
 [NASA-CASE-LEW-12590-1] c25 N81-19245  
**ENGINE STARTERS**  
 Portable device for use in starting  
 air-start-units for aircraft and having cable  
 lead testing capability  
 [NASA-CASE-FRC-10113-1] c33 N80-26599  
**ENGINE TESTS**  
 Electric propulsion engine test chamber  
 [NASA-CASE-XLE-00252] c11 N70-34844  
**ENGINEERING DRAWINGS**  
 High-temperature, high-pressure spherical  
 segment valve  
 [NASA-CASE-XAC-00074] c15 N70-34817  
 Graphic illustration of lifting body design  
 [NASA-CASE-FRC-10063] c01 N71-12217  
 Specifications and drawings for semipassive  
 optical communication system  
 [NASA-CASE-XLA-01090] c07 N71-12389  
 Method of making molded electric connector for  
 use with flat conductor cables  
 [NASA-CASE-XMF-03498] c15 N71-15986  
**ENTHALPY**  
 Measuring conductive heat flow and thermal  
 conductivity of laminar gas stream in  
 cylindrical plug to simulate atmospheric reentry  
 [NASA-CASE-XLE-00266] c14 N70-34156  
**ENTRAINMENT**  
 Water separator  
 [NASA-CASE-XMS-01295-1] c37 N79-21345  
**ENUMERATION**  
 Apparatus and process for microbial detection  
 and enumeration  
 [NASA-CASE-LAR-12709-1] c51 N81-29727  
**ENVIRONMENT SIMULATION**  
 Method and apparatus for applying compressional  
 forces to skeletal structure of subject to  
 simulate force during ambulatory conditions  
 [NASA-CASE-ABC-10100-1] c05 N71-24738  
 Gravity environment simulation by locomotion and  
 restraint aid for studying manual operation  
 performance of astronauts at zero gravity  
 [NASA-CASE-ABC-10153] c05 N71-28619

**ENVIRONMENT SIMULATORS**

Space environment simulator for testing  
 spacecraft components under aerospace conditions  
 [NASA-CASE-NFC-10141] c11 N71-24964  
**ENVIRONMENTAL CONTROL**  
 Portable environmental control and life support  
 system for astronaut in and out of spacecraft  
 [NASA-CASE-XMS-09632-1] c05 N71-11203  
 Portable apparatus producing high velocity  
 annular air column surrounding low velocity,  
 filtered, superclean air central core for  
 industrial clean room environmental control  
 [NASA-CASE-XMF-03212] c15 N71-22721  
 Development and characteristics of thermal  
 sensitive panel for controlling ratio of solar  
 absorptivity to surface emissivity for space  
 vehicle temperature control  
 [NASA-CASE-XLA-07728] c33 N71-22890  
 Dual solid cryogenics for spacecraft refrigeration  
 insuring low temperature cooling for extended  
 periods  
 [NASA-CASE-GSC-10188-1] c23 N71-24725  
 Vibration control of flexible bodies in steady  
 accelerating environment  
 [NASA-CASE-LAR-10106-1] c15 N71-27169  
 Test chamber for determining decomposition and  
 autoignition of materials used in spacecraft  
 under controlled environmental conditions  
 [NASA-CASE-KSC-10198] c11 N71-28629  
 Readily assembled universal environment housing  
 for electronic equipment  
 [NASA-CASE-KSC-10031] c15 N72-22486  
 Environmentally controlled suit for working in  
 sterile chamber  
 [NASA-CASE-LAR-10076-1] c05 N73-20137  
 Dual stage check valve for cryogenic supply  
 systems used in space flight environmental  
 control system  
 [NASA-CASE-MSC-13587-1] c15 N73-30459  
 Spacecraft with artificial gravity and earthlike  
 atmosphere  
 [NASA-CASE-LEW-11101-1] c31 N73-32750  
**ENVIRONMENTAL ENGINEERING**  
 Thermal control wall panel with application to  
 spacecraft cabins  
 [NASA-CASE-XLA-01243] c33 N71-22792  
**ENVIRONMENTAL MONITORING**  
 System for real-time crustal deformation  
 monitoring  
 [NASA-CASE-NPO-14124-1] c46 N80-14603  
**ENVIRONMENTAL TESTS**  
 Multisample test chamber for exposing materials  
 to X rays, temperature change, and gaseous  
 conditions and determination of material effects  
 [NASA-CASE-XMS-02930] c11 N71-23042  
 Space suit using nonflexible material with low  
 leakage and providing protection against  
 thermal extremes, physical punctures, and  
 radiation with high mobility articulation  
 [NASA-CASE-XAC-07043] c05 N71-23161  
 Flammability test chamber for testing materials  
 in certain predetermined environments  
 [NASA-CASE-KSC-10126] c11 N71-24985  
 Multiaxial vibration device for making vibration  
 tests along orthogonal axes of test specimen  
 [NASA-CASE-MFS-20242] c14 N73-19421  
 Fixture for environmental exposure of structural  
 materials under compression  
 [NASA-CASE-LAR-12602-1] c35 N81-19429  
**ENVIRONMENTS**  
 Hermetically sealed elbow actuator for use in  
 severe environments  
 [NASA-CASE-MFS-14710] c09 N72-22195  
**ENZYME ACTIVITY**  
 Use of enzyme hexokinase and glucose to reduce  
 inherent light levels of ATP in luciferase  
 compositions  
 [NASA-CASE-XGS-05533] c04 N69-27487  
 Enzymatic luminescent bioassay method for  
 determining bacterial levels in urine  
 [NASA-CASE-GSC-11092-2] c04 N73-27052  
**ENZYMES**  
 Protein sterilization of firefly luciferase  
 without denaturation  
 [NASA-CASE-GSC-10225-1] c06 N73-27086  
**EPICYCLOIDS**  
 Sequencing device utilizing planetary gear set  
 [NASA-CASE-MSC-19514-1] c37 N79-20377

**EPITAXY**

Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c76 N79-21910

**EPOXY COMPOUNDS**

Synthesis of siloxane containing epoxy polymers with low dielectric properties  
[NASA-CASE-MFS-13994-1] c06 N71-11240

Synthesis of siloxane containing epoxide and diamine polymers  
[NASA-CASE-MFS-13994-2] c06 N72-25148

Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c15 N79-26100

**EPOXY MATRIX COMPOSITES**

Fiberglass/epoxy composite automotive door structure including a glass-reinforced intrusion strip  
[NASA-CASE-MPO-15057-1] c24 N81-19230

**EPOXY RESINS**

Nonmagnetic hermetically sealed battery case made of epoxy resin and woven glass tape for use with electrochemical cells in spacecraft  
[NASA-CASE-XGS-00886] c03 N71-11053

Epoxy resin sealing device for electrochemical cells in high vacuum environments  
[NASA-CASE-XGS-02630] c03 N71-22974

Cold metal hydroforming techniques using epoxy molds for counteracting creep or stretch  
[NASA-CASE-XLE-05641-1] c15 N71-26346

Miniature electromechanical junction transducer operating on piezoelectric effect and utilizing epoxy for stress coupling component  
[NASA-CASE-ERC-10087] c14 N71-27334

Infusible polymer production from reaction of polyfunctional epoxy resins with polyfunctional aziridine compounds  
[NASA-CASE-MPO-10701] c06 N71-28620

Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c24 N74-30001

Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c27 N76-16230

Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c27 N81-17260

Universal connectors for joining stringers  
[NASA-CASE-LAR-12744-1] c37 N81-31551

Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c27 N82-10227

**EQUATIONS OF MOTION**

Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c54 N81-15699

**EQUIPMENT**

Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c35 N74-15126

Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c31 N80-32583

**EQUIPMENT SPECIFICATIONS**

Differential pressure cell insensitive to changes in ambient temperature and extreme overload  
[NASA-CASE-XAC-00042] c14 N70-34816

High-temperature, high-pressure spherical segment valve  
[NASA-CASE-XAC-00074] c15 N70-34817

Remote-reading torque meter for use where high horsepower are transmitted at high rotative speeds  
[NASA-CASE-XLE-00503] c14 N70-34818

Magnetically centered liquid column float  
[NASA-CASE-XAC-00030] c14 N70-34820

Electric propulsion engine test chamber  
[NASA-CASE-XLE-00252] c11 N70-34844

Channel-type shell construction for rocket engines and related configurations  
[NASA-CASE-XLE-00144] c28 N70-34860

Non-reusable kinetic energy absorber for application in soft landing of space vehicles  
[NASA-CASE-XLE-00810] c15 N70-34861

Slit regulated gas journal bearing  
[NASA-CASE-INP-00476] c15 N70-38620

Specifications and drawings for semipassive optical communication system  
[NASA-CASE-XLA-01090] c07 N71-12389

Stretcher with rigid head and neck support with capability of supporting immobilized person in vertical position for removal from vehicle hatch to exterior also useful as splint stretcher  
[NASA-CASE-XMF-06589] c05 N71-23159

Development of vortex fluid amplifier for throttling rocket exhaust  
[NASA-CASE-LEW-10374-1] c28 N73-13773

Simplified technique and device for producing industrial grade synthetic diamonds  
[NASA-CASE-MFS-20698-2] c15 N73-19457

Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c09 N74-19528

Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c34 N74-27744

Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c35 N76-15434

Field effect transistor and method of construction thereof  
[NASA-CASE-MFS-23312-1] c33 N78-27326

**EQUIPOTENTIALS**

Equipotential space suits utilizing mechanical aids to minimize astronaut energy at bending joints  
[NASA-CASE-LAR-10007-1] c05 N71-11195

Instrument for measuring potentials on two dimensional electric field plot  
[NASA-CASE-XLA-08493] c10 N71-19421

**ERGOMETERS**

Development of restraint system for securing personnel to ergometer while exercising under weightless conditions  
[NASA-CASE-MFS-21046-1] c14 N73-27377

Versatile ergometer with work load control  
[NASA-CASE-MFS-21109-1] c05 N73-27941

Tilting table for testing human body in variety of positions while exercising on ergometer or other biomedical devices  
[NASA-CASE-MFS-21010-1] c05 N73-30078

Pneumatic foot pedal operated fluidic exercising device  
[NASA-CASE-MSC-11561-1] c05 N73-32014

Ergometer calibrator --- for any ergometer utilizing rotating shaft  
[NASA-CASE-MFS-21045-1] c35 N75-15932

**EROSION**

Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206

**ERROR ANALYSIS**

Development of computer program for estimating reliability of self-repair and fault-tolerant systems with respect to selected system and mission parameters  
[NASA-CASE-MPO-13086-1] c15 N73-12495

Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c32 N79-10263

**ERROR CORRECTING DEVICES**

Error correction circuitry for binary signal channels  
[NASA-CASE-XNP-03263] c09 N71-18843

Multiplexed communication system design including automatic correction of transmission errors introduced by frequency spectrum shifts  
[NASA-CASE-XNP-01306] c07 N71-20814

Description of error correcting methods for use with digital data computers and apparatus for encoding and decoding digital data  
[NASA-CASE-XNP-02748] c08 N71-22749

Failure detection and control means for improved drift performance of a gimbaled platform system  
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Guide for a typewriter  
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A self-correcting electronically scanned pressure sensor  
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## ERROR SIGNALS

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### ERROR SIGNALS

Error correction circuitry for binary signal channels  
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[NASA-CASE-GSC-10554-1] c08 N71-29033  
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[NASA-CASE-MSC-12743-1] c32 N79-10263

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Analog to digital converter using offset voltage to eliminate errors  
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### ESCAPE CAPSULES

Aerial capsule emergency separation device using jettisonable towers  
[NASA-CASE-XLA-00115] c03 N70-33343  
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[NASA-CASE-XKS-02342] c05 N71-11199  
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[NASA-CASE-XNP-04148] c17 N71-24830  
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[NASA-CASE-NPO-10768-2] c06 N72-27144

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sterilized solid rocket propellants and encapsulating materials  
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[NASA-CASE-LAR-10782-2] c31 N75-13111

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- [NASA-CASE-XLE-00057] c28 N70-36711  
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- [NASA-CASE-LAR-11949-1] c67 N78-27121  
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- [NASA-CASE-XLE-00620] c32 N70-41579  
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- [NASA-CASE-KSC-10392] c67 N73-26117  
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- [NASA-CASE-ERC-10365-1] c31 N73-32749  
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- [NASA-CASE-LAR-10168-1] c33 N74-22865  
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- [NASA-CASE-XLA-00229] c12 N70-33305  
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- [NASA-CASE-XNP-03378] c03 N71-11051  
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- [NASA-CASE-ARC-10043-1] c05 N71-11193  
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- [NASA-CASE-XLA-02898] c05 N71-20268  
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- [NASA-CASE-XAC-07043] c05 N71-23161
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- [NASA-CASE-MSC-12239-1] c52 N79-21750
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- [NASA-CASE-LAR-10739-1] c14 N73-16484
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- [NASA-CASE-XLA-02854] c15 N69-27490  
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- [NASA-CASE-XGS-00824] c15 N71-16078  
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- [NASA-CASE-XGS-02422] c15 N71-21529
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- [NASA-CASE-LAR-10800-1] c33 N72-27959  
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- [NASA-CASE-NFO-11330] c33 N73-26958  
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- [NASA-CASE-MSC-18179-1] c20 N80-18097
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- [NASA-CASE-XMF-00375] c15 N70-34249
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- [NASA-CASE-LAR-10941-1] c37 N74-21057  
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- [NASA-CASE-MFS-20861-1] c18 N73-32437  
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- [NASA-CASE-NFO-11743-1] c28 N74-27425  
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- [NASA-CASE-NPO-11130] c08 N72-20176
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- [NASA-CASE-NFO-13808-1] c35 N78-15461  
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- [NASA-CASE-MFS-25405-1] c35 N81-27459
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- [NASA-CASE-XNE-00612] c11 N70-38182
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- [NASA-CASE-XMF-07587] c15 N71-18701
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- [NASA-CASE-XLA-10322] c15 N72-17452  
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- [NASA-CASE-NPO-14221-1] c37 N81-25370
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- [NASA-CASE-LAR-12468-1] c08 N80-22359
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Liquid-gas separator adapted for use in zero gravity environment - drawings
- [NASA-CASE-XMS-01624] c15 N70-40062  
Chassis unit insert tightening-extract device
- [NASA-CASE-XMS-01077-1] c37 N79-33467
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- [NASA-CASE-XMS-09632-1] c05 N71-11203  
Hand-held maneuvering unit for propulsion and attitude control of astronauts in zero or reduced gravity environment
- [NASA-CASE-XMS-05304] c05 N71-12336  
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- [NASA-CASE-XMF-05344] c31 N71-16345

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[NASA-CASE-ARC-10140-1] c15 N71-17653

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[NASA-CASE-MSC-12243-1] c05 N71-24728

Open loop life support subsystem using breathing bag as reservoir for EVA  
[NASA-CASE-MSC-12411-1] c05 N72-20096

Intra- and extravehicular life support space suite for Apollo astronauts  
[NASA-CASE-MSC-12609-1] c05 N73-32012

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VHF/UHF parasitic probe antenna for spacecraft communication  
[NASA-CASE-XKS-09340] c07 N71-24614

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[NASA-CASE-LAR-12657-1] c32 N80-26571

**EXTRUDING**

Extrusion can for extruding ceramics under heat and pressure  
[NASA-CASE-NPO-10812] c15 N73-13464

Brazing alloy binder  
[NASA-CASE-XMF-05868] c26 N75-27125

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[NASA-CASE-NPO-13758-2] c31 N81-15154

**EYE (ANATOMY)**

Sight switch using infrared source and sensor mounted beside eye  
[NASA-CASE-XMF-03934] c09 N71-22985

Ultrasonic device for ophthalmic eye surgery with safe removal of macerated material  
[NASA-CASE-LEW-11669-1] c05 N73-27062

Corneal seal device  
[NASA-CASE-LEW-12258-1] c52 N77-28716

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[NASA-CASE-LEW-12723-1] c52 N80-18690

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[NASA-CASE-LAR-12251-1] c74 N80-27185

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[NASA-CASE-ARC-10329-1] c05 N73-26072

Multi-parameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c54 N75-27759

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[US-PATENT-RE-28,921] c52 N76-30793

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Wide angle eyepiece with long eye-relief distance  
[NASA-CASE-XMS-06056-1] c23 N71-24857

## F

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Fabrication of pressure-telemetry transducers  
[NASA-CASE-XNP-09752] c14 N69-21541

Fabrication method for lightweight regeneratively cooled combustion chamber of channel construction  
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Fabrication methods for matrices of solar cell submodules  
[NASA-CASE-XNP-05821] c03 N71-11056

Capacitor fabrication by solidifying mixture of ferromagnetic metal particles, nonferromagnetic particles, and dielectric material  
[NASA-CASE-LEW-10364-1] c09 N71-13522

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[NASA-CASE-XNP-03413] c03 N71-26726

Fabrication of root cord restrained fabric suit sections from sheets of fabric  
[NASA-CASE-MSC-12398] c05 N72-20098

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[NASA-CASE-FRC-10038] c15 N72-20444

Development of thin film temperature sensor from TaO  
[NASA-CASE-NPO-11775] c26 N72-28761

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[NASA-CASE-GSC-12022-1] c44 N76-28635

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[NASA-CASE-NFC-13707-1] c74 N77-28933

Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c27 N78-32262

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Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c44 N81-19558

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[NASA-CASE-LEW-12441-3] c44 N81-24519

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[NASA-CASE-NPO-13689-4] c44 N81-26553

**FABRICS**

Fabrication of root cord restrained fabric suit sections from sheets of fabric  
[NASA-CASE-MSC-12398] c05 N72-20098

Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c35 N77-22449

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[NASA-CASE-LAR-12147-1] c31 N79-11246

Absorbent product and articles made therefrom --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c24 N81-16127

Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c27 N81-19296

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[NASA-CASE-XGS-04480] c16 N69-27491

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Restoration and improvement of demodulated facsimile video signals  
[NASA-CASE-GSC-10185-1] c07 N72-12081

Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c35 N75-19613

**FACTORIAL DESIGN**

Space suit with pressure-volume compensator system  
[NASA-CASE-XLA-05332] c05 N71-11194

Equipotential space suits utilizing mechanical aids to minimize astronaut energy at bending joints  
[NASA-CASE-LAR-10007-1] c05 N71-11195

**FAIL-SAFE SYSTEMS**

Fail-safe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c09 N72-25262

Latch mechanism  
[NASA-CASE-MSC-12549-1] c37 N74-27903

Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HCN-10888-1] c44 N79-14527

Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c33 N79-24254

Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c60 N80-30050

Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c07 N81-19115

**FAILURE ANALYSIS**

Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c39 N79-22537

**FAILURE MODES**

Method for reducing mass of ball bearings for long life operation at high speed  
[NASA-CASE-LEW-10856-1] c15 N72-22490

Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c35 N74-18090

**FAIRINGS**

System for deploying and ejecting releasable

- clamsheal fairing sections from spinning sounding rockets  
[NASA-CASE-GSC-10590-1] c31 N73-14853
- FALLING SPHERES**  
Device for determining acceleration of gravity by interferometric measurement of travel of falling body  
[NASA-CASE-XMP-05844] c14 N71-17587  
Method of forming frozen spheres in a force-free drop tower --- microballoons for inertial confinement fusion  
[NASA-CASE-NPO-14845-1] c31 N81-16328
- FAR INFRARED RADIATION**  
Collimator for analyzing spatial location of near and distant sources of radiation  
[NASA-CASE-MFS-20546-2] c14 N73-30389
- FAR ULTRAVIOLET RADIATION**  
Transient heat transfer gage for measuring total radiant intensity from far ultraviolet and ionized high temperature gases  
[NASA-CASE-XMP-09802] c33 N71-15641
- FARADAY EFFECT**  
Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c35 N82-15381
- FAST FOURIER TRANSFORMATIONS**  
A pipelined digital SAR azimuth correlator using hybrid FFT/transversal-filter  
[NASA-CASE-NPO-15519-1] c32 N82-12298
- FASTENERS**  
Force measuring instrument for structural members, particularly fastening bolts or studs  
[NASA-CASE-XMP-00456] c14 N70-34705  
Lightweight life preserver without fastening devices  
[NASA-CASE-XMS-00864] c05 N70-36493  
Nut and bolt fastener permitting all-directional movement of skin sections with respect to supporting structure  
[NASA-CASE-XLA-01807] c15 N71-10799  
Releasable, pin-type fastener, easily operated during EVA  
[NASA-CASE-ARC-10140-1] c15 N71-17653  
Ultrasonic wrench for applying vibratory energy to mechanical fasteners  
[NASA-CASE-MFS-20586] c15 N71-17686  
Design and development of electric connectors for rigid and semirigid coaxial cables  
[NASA-CASE-XNP-04732] c09 N71-20851  
Design, development, and characteristics of latching mechanism for operation in limited access areas  
[NASA-CASE-XMS-03745] c15 N71-21076  
Design and development of module joint clamping device for application to solar array construction  
[NASA-CASE-XNP-02341] c15 N71-21531  
Threadless fastener apparatus comprising receiving apertures for plurality of articles, self-locked condition, and capable of using nonmalleable materials in both ends  
[NASA-CASE-XFR-05302] c15 N71-23254  
Development of resilient fastener for attaching skin of aerospace vehicles to permit movement of skin relative to framework  
[NASA-CASE-XLA-01027] c31 N71-24035  
Pneumatic mechanism for releasing hook and loop fasteners between large rigid structures  
[NASA-CASE-XMS-10660-1] c15 N71-25975  
Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c54 N78-17678  
Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c37 N79-33467  
One step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c37 N80-11469
- FATIGUE (MATERIALS)**  
Servocontrol system for measuring local stresses at geometric discontinuity in stressed material  
[NASA-CASE-XLA-08530] c32 N71-25360  
TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c39 N78-16387  
Pulsed phase locked loop strain monitor  
[NASA-CASE-LAR-12772-1] c33 N81-15195  
Antenna grout replacement system  
[NASA-CASE-NFO-15205-1] c37 N81-19457
- FATIGUE LIFE**  
Fatigue resistant shear pin with hollow shaft and two plugs  
[NASA-CASE-XLA-09122] c15 N69-27505
- Improving load capacity and fatigue life of rolling element systems in rockets and missiles  
[NASA-CASE-XLE-02999] c15 N71-16052  
Method for reducing mass of ball bearings for long life operation at high speed  
[NASA-CASE-LEW-10856-1] c15 N72-22490  
Fatigue life of hybrid antifriction bearings at ultrahigh speeds  
[NASA-CASE-LEW-11152-1] c15 N73-32359  
Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-13731-1] c39 N78-10493
- FATIGUE TESTING MACHINES**  
Cryostat for use with horizontal fatigue testing machines at low temperatures  
[NASA-CASE-XMP-10968] c14 N71-24234  
Fatigue testing apparatus with light shield and infrared reflector for high temperature evaluation of loaded sheet samples  
[NASA-CASE-XLA-01782] c14 N71-26136
- FATIGUE TESTS**  
Fatigue testing device applying random discrete load levels to test specimen and applicable to aircraft structures  
[NASA-CASE-XLA-02131] c32 N70-42003  
Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c39 N79-22537  
Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c39 N80-25693
- FATS**  
Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c27 N77-31308
- FECS**  
Fecal waste disposal container  
[NASA-CASE-XMS-06761] c05 N69-23192
- FEED SYSTEMS**  
Nonconductive tube as feed system for plasma thruster  
[NASA-CASE-XLF-02902] c25 N71-21694  
Method and apparatus for pressurizing propellant tanks used in propulsion motor feed system  
[NASA-CASE-XNP-00650] c27 N71-28929  
Pressurized tank for feeding liquid waste into processing equipment  
[NASA-CASE-LAR-10365-1] c05 N72-27102  
Pressurized inert gas feed for lighting system  
[NASA-CASE-KSC-10644] c09 N72-27227  
Dual frequency feed systems for Cassegrainian antennas  
[NASA-CASE-NPO-13091-1] c09 N73-12214  
Improved injector with porous plug for bubbles of gas into feed lines of electrically conductive liquid  
[NASA-CASE-NPO-11377] c15 N73-27406  
Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c20 N80-14188  
Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c31 N80-18231  
Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c31 N81-15154  
Improved constant-output atomizer  
[NASA-CASE-MFS-25631-1] c34 N82-10360
- FEEDBACK**  
RC networks with voltage amplifier, RC input circuit, and positive feedback  
[NASA-CASE-ARC-10020] c10 N72-17172  
Multistage feedback shift register with states decomposable into cycles of equal length  
[NASA-CASE-NPO-11082] c08 N72-22167  
Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c09 N72-25254
- FEEDBACK AMPLIFIERS**  
Development of system with electrical properties which vary with changes in temperature for use with feedback loop in operational amplifier circuit  
[NASA-CASE-MSC-13276-1] c14 N71-27058  
Phase locked demodulator with bandwidth switching amplifier circuit  
[NASA-CASE-XNP-01107] c10 N71-28859  
Monostable multivibrator for producing output pulse widths with positive feedback NOR gates  
[NASA-CASE-MSC-13492-1] c10 N71-28860  
High stability amplifier  
[NASA-CASE-GSC-12646-1] c33 N81-32391
- FEEDBACK CIRCUITS**  
Low power drain transistor feedback circuit

[NASA-CASE-XGS-04999] c09 N69-24317  
 Linear three-tap feedback shift register  
 [NASA-CASE-NPO-10351] c08 N71-12503  
 Frequency control network for current feedback  
 oscillators converting dc voltage to ac or  
 higher dc voltages  
 [NASA-CASE-GSC-10041-1] c10 N71-19418  
 Feedback integrating circuit with grounded  
 capacitor for signal processing  
 [NASA-CASE-XAC-10607] c10 N71-23669  
 Development of idler feedback system to reduce  
 electronic noise problem in two parametric  
 amplifiers  
 [NASA-CASE-LAR-10253-1] c09 N72-25258  
 Linear shift register with feedback logic for  
 generating pseudonoise linear recurring binary  
 sequences  
 [NASA-CASE-NFO-11406] c08 N73-12175  
 Logarithmic circuit with wide dynamic range  
 [NASA-CASE-GSC-12145-1] c33 N78-32339  
 Automatic level control circuit  
 [NASA-CASE-KSC-11170-1] c33 N81-29347

**FEEDBACK CONTROL**  
 Describing continuous analog to digital  
 converter with parallel digital output and  
 nonlinear feedback  
 [NASA-CASE-XAC-04031] c08 N71-18594  
 Pulsed magnetic core memory element with  
 blocking oscillator feedback for interrogation  
 without loss of digital information  
 [NASA-CASE-XGS-03303] c08 N71-18595  
 Binary to decimal decoder logic circuit design  
 with feedback control and display device  
 [NASA-CASE-XKS-06167] c08 N71-24890  
 Feedback control for direct current motor to  
 achieve constant speed under varying loads  
 [NASA-CASE-MFS-14610] c09 N71-28886  
 Feedback controller for sampling error signals  
 within single control formulation time interval  
 [NASA-CASE-GSC-10554-1] c08 N71-29033  
 Closed loop servosystem for variable speed tape  
 recorders onboard spacecraft  
 [NASA-CASE-NPO-10700] c07 N71-33613  
 Development of aerodynamic control system to  
 control flutter over large range of  
 oscillatory frequencies using stability  
 augmentation techniques  
 [NASA-CASE-LAR-10682-1] c02 N73-26004  
 Regulated dc-to-dc converter for voltage step-up  
 or step-down with input-output isolation  
 [NASA-CASE-HQN-10792-1] c33 N74-11049  
 Diffused waveguiding capillary tube with  
 distributed feedback for a gas laser  
 [NASA-CASE-NPO-13544-1] c36 N76-18428  
 The dc-to-dc converters employing  
 staggered-phase power switches with two-loop  
 control  
 [NASA-CASE-NFO-13512-1] c33 N77-10428  
 System and method for tracking a signal source  
 --- employing feedback control  
 [NASA-CASE-HQN-10880-1] c17 N78-17140  
 Closed loop spray cooling apparatus --- for  
 particle accelerator targets  
 [NASA-CASE-LEW-11981-1] c31 N78-17237  
 Wide power range microwave feedback controller  
 [NASA-CASE-GSC-12146-1] c33 N78-32340  
 Discriminator aided phase lock acquisition for  
 suppressed carrier signals  
 [NASA-CASE-NPO-14311-1] c32 N79-14276  
 Active notch filter network with variable notch  
 depth, width and frequency  
 [NASA-CASE-FRC-11055-1] c33 N80-29583  
 Tuned analog network --- bandpass filter networks  
 [NASA-CASE-GSC-12650-1] c33 N82-10324

**FEEDBACK FREQUENCY MODULATION**  
 Method and apparatus for communicating through  
 ionized layer of gases surrounding spacecraft  
 during reentry into planetary atmospheres  
 [NASA-CASE-XLA-01127] c07 N70-41372  
 Characteristics of data-aided carrier tracking  
 loop used for tracking carrier in angle  
 modulated communications system  
 [NASA-CASE-NPO-11282] c10 N73-16205  
 Linear phase demodulator including a phase  
 locked loop with auxiliary feedback loop  
 [NASA-CASE-GSC-12018-1] c33 N77-14334

**FEEDERS**  
 Automatic real-time pair-feeding system for  
 animals

[NASA-CASE-ARC-10302-1] c51 N74-15778

**FELTS**  
 Thermal insulation attaching means --- adhesive  
 bonding of felt vibration insulators under  
 ceramic tiles  
 [NASA-CASE-MSC-12619-2] c27 N79-12221

**FEMALES**  
 Liquid cooled brassiere and method of diagnosing  
 malignant tumors therewith  
 [NASA-CASE-ARC-11007-1] c52 N77-14736  
 Urine collection device  
 [NASA-CASE-MSC-16433-1] c52 N78-27750  
 Urine collection apparatus --- feminine hygiene  
 [NASA-CASE-MSC-18381-1] c52 N81-28740

**FERRITES**  
 Magnetic recording head composed of ferrite core  
 coated with thin film of aluminum-iron-silicon  
 alloy  
 [NASA-CASE-GSC-10097-1] c08 N71-27210  
 Method for making conductors for ferrite memory  
 arrays --- from pre-formed metal conductors  
 [NASA-CASE-LAR-10994-1] c24 N75-13032  
 Device for measuring the ferrite content in an  
 austenitic stainless-steel weld  
 [NASA-CASE-MFS-22907-1] c26 N76-18257

**FERROMAGNETIC MATERIALS**  
 Magnetic heat pumping  
 [NASA-CASE-LEW-12508-1] c34 N78-17335

**FERROMAGNETISM**  
 High temperature ferromagnetic cobalt-base alloy  
 for electrical power generating equipment  
 [NASA-CASE-XLE-03629] c17 N71-23248

**FIBER COMPOSITES**  
 Fibrous refractory composite insulation ---  
 shielding reusable spacecraft  
 [NASA-CASE-ARC-11169-1] c24 N79-24062  
 Method for making patterns for resin matrix  
 composites  
 [NASA-CASE-ARC-11246-1] c24 N80-22410  
 Universal connectors for joining stringers  
 [NASA-CASE-LAR-12744-1] c37 N81-31551

**FIBER OPTICS**  
 Fiber optic transducers for monitoring and  
 analysis of vibration in aerospace vehicles  
 and onboard equipment  
 [NASA-CASE-XMF-02433] c14 N71-10616  
 Fiber distributed feedback laser  
 [NASA-CASE-NFC-13531-1] c36 N76-24553  
 Fiber optic multiplex optical transmission system  
 [NASA-CASE-KSC-11047-1] c74 N78-14889  
 Low intensity X-ray and gamma-ray imaging device  
 --- fiber optics  
 [NASA-CASE-GSC-12263-1] c74 N79-20857  
 Low intensity X-ray and gamma-ray imaging  
 spectrometer  
 [NASA-CASE-GSC-12587-1] c35 N80-29635  
 Fiber optic crossbar switch for automatically  
 patching optical signals  
 [NASA-CASE-KSC-11104-1] c74 N81-12862  
 Precise RF timing signal distribution to remote  
 stations --- fiber optics  
 [NASA-CASE-NPO-14749-1] c32 N81-14186  
 Optical crystal temperature gauge with fiber  
 optic connections --- cryogenic systems  
 [NASA-CASE-MSC-18627-1] c74 N81-15818  
 Apparatus for fiber optic liquid level sensing  
 [NASA-CASE-MSC-18674-1] c74 N81-24907  
 Interleaving device  
 [NASA-CASE-GSC-12111-2] c33 N81-29342  
 Optical gyroscope system  
 [NASA-CASE-NFO-14258-1] c35 N81-33448

**FIBER REINFORCED COMPOSITES**  
 Fiberglass/epoxy composite automotive door  
 structure including a glass-reinforced  
 intrusion strip  
 [NASA-CASE-NPO-15057-1] c24 N81-19230  
 Composition and method for making polyimide  
 resin-reinforced fabric  
 [NASA-CASE-LEW-12933-1] c27 N81-19296

**FIBER RELEASE**  
 Curing agent for polyepoxides and epoxy resins  
 and composites cured therewith --- preventing  
 carbon fiber release  
 [NASA-CASE-LEW-13226-1] c27 N81-17260

**FIBERS**  
 Process for fiberizing ceramic materials with  
 high fusion temperatures and tensile strength  
 [NASA-CASE-XNP-00597] c18 N71-23088

- Method and apparatus for fluffing, separating, and cleaning fibers  
[NASA-CASE-LAR-11224-1] c37 N76-18456
- Composite lamination method  
[NASA-CASE-LAR-12019-1] c24 N78-17150
- Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c44 N79-10513
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c25 N81-19244
- FIELD EFFECT TRANSISTORS**
- Frequency to analog converters with unipolar field effect transistor for determining potential charge by pulse duration of input signal  
[NASA-CASE-XNF-07040] c08 N71-12500
- Voltage controlled, variable frequency relaxation oscillator with MOSFET variable current feed  
[NASA-CASE-GSC-10022-1] c10 N71-25882
- Circuitry for high input impedance video processor with high noise immunity  
[NASA-CASE-NPO-10199] c09 N72-17156
- Development and characteristics of data multiplexer circuit using field effect transistors arranged in tree switching configuration  
[NASA-CASE-NPO-11333] c08 N72-22162
- Single integrated circuit chip with field effect transistor  
[NASA-CASE-GSC-10835-1] c09 N72-33205
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c76 N74-20329
- Stored charge transistor  
[NASA-CASE-NPO-11156-2] c33 N75-31331
- Field effect transistor and method of construction thereof  
[NASA-CASE-MFS-25512-1] c33 N78-27326
- JFET oscillator  
[NASA-CASE-GSC-12555-1] c33 N80-26601
- Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c33 N81-26360
- CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c33 N81-27396
- Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c33 N82-11359
- FIELD EMISSION**
- Electrode with multiple columnar conductors for limiting field emission current  
[NASA-CASE-ERC-10015-2] c10 N72-27246
- FIELD OF VIEW**
- Scanner --- photography from a spin stabilized synchronous satellite  
[NASA-CASE-GSC-12032-2] c43 N82-13465
- FILAMENT WINDING**
- Tool attachment for spreading or moving away loose elements from terminal posts during winding of filamentary elements  
[NASA-CASE-XMF-02107] c15 N71-10809
- Fabrication of filament wound propellant tank for cryogenic storage  
[NASA-CASE-XLE-03803-2] c15 N71-17651
- Twisted wire or tube superconductor for filament windings  
[NASA-CASE-LEW-11015] c26 N73-32571
- Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c24 N77-19171
- FILAMENTS**
- Refractory filament series circuitry for radiant heater  
[NASA-CASE-XLE-00387] c33 N70-34812
- Controlled diffusion reaction process for masking substrate of twisted multifilament superconductive ribbon  
[NASA-CASE-LEW-11726-1] c26 N73-26752
- FILLERS**
- Filling honeycomb matrix with deaerated paste filler  
[NASA-CASE-XMS-01108] c15 N69-24322
- Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c24 N78-27180
- Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NFO-10424-1] c27 N81-24258
- Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c44 N81-27615
- FILM COOLING**
- Multislot film cooled pyrolytic graphite rocket nozzle  
[NASA-CASE-XNP-04389] c28 N71-20942
- Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c34 N81-12363
- FILM THICKNESS**
- Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c25 N79-28253
- Dual-beam skin friction interferometer --- portable equipment  
[NASA-CASE-ARC-11354-1] c36 N81-29415
- FILMS**
- Apparatus for obtaining isotropic irradiation on film emulsion from parallel radiation source  
[NASA-CASE-MFS-20095] c24 N72-11595
- Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c76 N76-20994
- FILTERS**
- Development of filter system for control of outgas contamination in vacuum conditions using absorbent beds of molecular sieve zeolite, silica gel, and charcoal  
[NASA-CASE-MFS-14711] c15 N71-26185
- Heated tungsten filter for removing oxygen impurities from cesium  
[NASA-CASE-XNP-04262-2] c17 N71-26773
- Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c34 N74-30608
- FILTRATION**
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c28 N81-15119
- PINS**
- Thrust and attitude control apparatus using jet nozzle in movable canard surface or fin configuration  
[NASA-CASE-XLE-03583] c31 N71-17629
- Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c08 N74-30421
- FIRE EXTINGUISHERS**
- Synthesis of dawsonites  
[NASA-CASE-ARC-113261-1] c25 N80-31490
- Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c31 N81-14137
- Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c25 N82-12168
- FIRE PREVENTION**
- Hydrogen fire blink detector for high altitude rocket or ground installation  
[NASA-CASE-MFS-15063] c14 N72-25412
- Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c35 N74-21019
- FIREPROOFING**
- Fireproof potassium silicate coating composition, insoluble in water after application  
[NASA-CASE-GSC-10072] c18 N71-14014
- Lightweight fire resistant plastic foam for thermal protection of reentry vehicles and aircraft structures  
[NASA-CASE-ARC-10180-1] c28 N72-20767
- Intumescent paint containing nitrile rubber for fire protection  
[NASA-CASE-ARC-10196-1] c18 N73-13562
- Para-benzoquinone dioxime and concentrated mineral acid processed to yield intumescent or fire resistant, heat insulating materials  
[NASA-CASE-ARC-10304-1] c18 N73-26572
- Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c27 N74-12814
- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c27 N76-24405
- Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c27 N78-17213
- Fire protection covering for small diameter missiles

[NASA-CASE-ARC-11104-1] c15 N79-26100

**FIRES**

Device for generating and controlling combustion products for testing of fire detection system [NASA-CASE-GSC-11095-1] c14 N72-10375

Device for detecting hydrogen fires onboard high altitude rockets [NASA-CASE-MFS-13130] c10 N72-17173

**FIRING (IGNITING)**

Contamination free separation nut eliminating combustion products from ambient surroundings generated by squib firing [NASA-CASE-XGS-01971] c15 N71-15922

**FITTINGS**

Design and development of quick release connector [NASA-CASE-XLA-01141] c15 N71-13789

Development and characteristics of strainer for flared tube fitting [NASA-CASE-XLA-05056] c15 N72-11389

**FIXED WINGS**

Design of supersonic aircraft with novel fixed, swept wing planform [NASA-CASE-XLA-04451] c02 N71-12243

**FIXTURES**

Tool for use in lifting pin supported objects [NASA-CASE-NPO-13157-1] c37 N74-32918

Apparatus for positioning modular components on a vertical or overhead surface [NASA-CASE-LAR-11465-1] c37 N76-21554

Heat treat fixture and method of heat treating [NASA-CASE-LAR-11821-1] c26 N80-28492

**FLAME PROBES**

Flame detector operable in presence of proton radiation [NASA-CASE-MFS-21577-1] c19 N74-29410

**FLAME RETARDANTS**

Flame retardant spandex type polyurethanes [NASA-CASE-MSC-14331-2] c27 N78-17213

Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments [NASA-CASE-MSC-14331-3] c27 N78-32262

Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams [NASA-CASE-ARC-11107-1] c25 N80-16116

Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation [NASA-CASE-LAR-12099-1] c27 N80-16158

Heat resistant polymers of oxidized styrylphosphine [NASA-CASE-MSC-14903-3] c27 N80-24438

Structural wood panels with improved fire resistance [NASA-CASE-ARC-11174-1] c24 N81-13999

Resin composition, process for producing the same, product produced therefrom and process for producing said product [NASA-CASE-ARC-11331-1] c27 N81-31363

Phosphorus-containing iside resins [NASA-CASE-ARC-11368-1] c27 N81-31364

**FLAME SPRAYING**

Flame or plasma spraying for molybdenum coating of carbon or graphite surfaces to prevent oxidative corrosion [NASA-CASE-XLA-00302] c15 N71-16077

Modification of polyurethanes with alkyl halide resins, inorganic salts, and encapsulated volatile and reactive halogen for fuel fire control [NASA-CASE-ARC-10098-1] c06 N71-24739

Method of making pressure tight seal for super alloy [NASA-CASE-LAR-10170-1] c37 N74-11301

**FLAME TEMPERATURE**

Direct heating surface combustor [NASA-CASE-LER-11877-1] c34 N78-27357

**FLAMES**

Anodizing method for providing metal surfaces with temperature reducing coatings against flames [NASA-CASE-XLE-00035] c33 N71-29151

Modulated hydrogen ion flame detector [NASA-CASE-ARC-10322-1] c35 N76-18403

**FLAMMABILITY**

Flammability test chamber for testing materials in certain predetermined environments [NASA-CASE-KSC-10126] c11 N71-24985

Development of apparatus for testing burning rate and flammability of materials [NASA-CASE-XMS-09690] c33 N72-25913

Compound oxidized styrylphosphine --- flame resistant vinyl polymers [NASA-CASE-MSC-14903-2] c27 N80-10358

Vitra-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments [NASA-CASE-MSC-16074-1] c27 N80-26446

**FLANGES**

Cassegrain antenna subreflector flange for suppressing ground noise and increasing antenna transmitting efficiency [NASA-CASE-XNP-00683] c09 N70-35425

Light baffle with oblate hemispheroid surface and shading flange [NASA-CASE-NPO-10337] c14 N71-15604

Flanged major modular assembly jig [NASA-CASE-MSC-19372-1] c39 N76-31562

Clamp-mount device [NASA-CASE-MFS-25510-1] c37 N82-11470

**FLAPS (CONTROL SURFACES)**

Upper surface, external flow, jet-augmented flap configuration for high wing jet aircraft for noise reduction [NASA-CASE-XLA-00087] c02 N70-33332

Assembly for opening flight capsule stabilizing and decelerating flaps with reference to capsule recovery [NASA-CASE-XMF-00641] c31 N70-36410

Direct lift control system having flaps with slots adjacent to their leading edge and particularly adapted for lightweight aircraft [NASA-CASE-LAR-10249-1] c02 N71-26110

Reversed cowl flap inlet thrust augmentor --- with adjustable airfoil [NASA-CASE-ARC-10754-1] c07 N75-24736

**FLARED BODIES**

Development and characteristics of strainer for flared tube fitting [NASA-CASE-XLA-05056] c15 N72-11389

**FLASH LAMPS**

Active lamp pulse driver circuit --- for use in laser transmitters [NASA-CASE-GSC-12566-1] c36 N82-10390

**FLAT CONDUCTORS**

Method of making molded electric connector for use with flat conductor cables [NASA-CASE-XMF-03498] c15 N71-15986

Shielded flat conductor cable fabricated by electroless and electrolytic plating [NASA-CASE-MFS-13687] c09 N71-28691

Shielded flat conductor cable of ribbonlike wires laminates in thin flexible insulation [NASA-CASE-MFS-13687-2] c09 N72-22198

Separable flat cable connector with isolated electrical contacts [NASA-CASE-MFS-20757] c09 N72-28225

Method and apparatus for preparing multiconductor cable with flat conductors [NASA-CASE-MFS-10946-1] c31 N79-21226

Edge coating of flat wires [NASA-CASE-XMF-05757-1] c31 N79-21227

**FLAT PLATES**

Reduced gravity liquid configuration simulator to study propellant behavior in rocket fuel tanks [NASA-CASE-XLE-02624] c12 N69-39988

Exponential horn, copper plate, magnetic hammer, and anvil in apparatus for making diamonds [NASA-CASE-MFS-20698] c15 N72-20446

Heat transfer device [NASA-CASE-MFS-22936-1] c34 N76-18374

Flat-plate heat pipe [NASA-CASE-GSC-11998-1] c34 N77-32413

**FLEXIBILITY**

Weatherproof helix antenna [NASA-CASE-XKS-08485] c07 N71-19493

Flexible bellows joint shielding sleeve for propellant transfer pipelines [NASA-CASE-XNP-01855] c15 N71-28937

Flexible joint for pressurizable garment [NASA-CASE-MSC-11072] c54 N74-32546

Nozzle extraction process and handlemeter for measuring handle [NASA-CASE-LAR-12147-1] c31 N79-11246

- Safety flywheel --- using flexible materials  
energy storage  
[NASA-CASE-HCN-10888-1] c44 N79-14527
- FLEXIBLE BODIES**
- Flexible backup bar for welding awkwardly shaped structures  
[NASA-CASE-XNP-00722] c15 N70-40204
- Characteristics of hermetically sealed electric switch with flexible operating capability  
[NASA-CASE-XNP-09808] c09 N71-12518
- Flexible composite membrane structure impervious to extremely reactive chemicals in rocket propellants  
[NASA-CASE-XNP-06837] c18 N71-16210
- Development and characteristics of self supporting space vehicle  
[NASA-CASE-XLA-00117] c31 N71-17680
- Design and development of flexible tunnel for use by spacecrews in performing extravehicular activities  
[NASA-CASE-MSC-12243-1] c05 N71-24728
- Vibration control of flexible bodies in steady accelerating environment  
[NASA-CASE-LAR-10106-1] c15 N71-27169
- Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747
- Development of device for simulating cyclic thermal loading of flexible materials by application of mechanical stresses and deformations  
[NASA-CASE-LAR-10270-1] c32 N72-25877
- Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c08 N74-30421
- Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c37 N75-19686
- Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c27 N80-16163
- FLEXIBLE WINGS**
- Aeroflexible wing structure with air scoop for inflating stiffeners with ram air  
[NASA-CASE-XLA-06095] c01 N69-39981
- Deployment system for flexible wing with rigid superstructure  
[NASA-CASE-XLA-01220] c02 N70-41863
- Development and characteristics of control system for flexible wings  
[NASA-CASE-XLA-06958] c02 N71-11038
- FLEXING**
- Two degree inverted flexure from single block of material  
[NASA-CASE-ARC-10345-1] c15 N73-12488
- Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c54 N80-30043
- FLIGHT**
- Flow meter for measuring stagnation pressure in boundary layer around high speed flight vehicle  
[NASA-CASE-XFR-02007] c12 N71-24692
- FLIGHT ALTITUDE**
- Surface based altitude measuring system for accurately measuring altitude of airborne vehicle  
[NASA-CASE-ERC-10412-1] c09 N73-12211
- Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-FRC-10049-1] c04 N74-13420
- Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c35 N79-18296
- Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c36 N81-19439
- System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c66 N82-16075
- FLIGHT CONTROL**
- Aircraft indicator for pilot control of takeoff roll, climbout path and verticle flight path in poor visibility conditions  
[NASA-CASE-XLA-00487] c14 N70-40157
- Two axis flight controller with potentiometer control shafts directly coupled to rotatable ball members  
[NASA-CASE-XFR-04104] c03 N70-42073
- Development of aircraft control system with high performance electrically controlled and mechanically operated hydraulic valves for precise flight operation  
[NASA-CASE-XAC-00048] c02 N71-29128
- Development of flight simulator system to show position of joystick displacement  
[NASA-CASE-NFC-11497] c08 N73-25206
- Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c08 N74-10942
- G-load measuring and indicator apparatus --- for aircraft  
[NASA-CASE-ARC-10806] c06 N74-27872
- Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c05 N75-12930
- Deploy/release system --- model aircraft flight control  
[NASA-CASE-LAR-11575-1] c02 N76-16014
- Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c06 N81-22048
- FLIGHT CREWS**
- Survival couch for aircraft or spacecraft crews  
[NASA-CASE-XLA-00118] c05 N70-33285
- FLIGHT HAZARDS**
- CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c47 N81-16677
- FLIGHT RECORDERS**
- Event recorder with constant speed motor which rotates recording disk  
[NASA-CASE-XLA-01832] c14 N71-21006
- FLIGHT SAFETY**
- Aerial capsule emergency separation device using jettisonable towers  
[NASA-CASE-XLA-00115] c03 N70-33343
- Development and characteristics of electronic signalling system and data processing equipment for warning systems to avoid midair collisions between aircraft  
[NASA-CASE-LAR-10717-1] c21 N73-30641
- FLIGHT SIMULATION**
- Lunar landing flight research vehicle  
[NASA-CASE-XFR-00929] c31 N70-34966
- Television simulation for aircraft and space flight  
[NASA-CASE-XFR-03107] c09 N71-19449
- Electrical circuit selection device for simulating stage separation of flight vehicle  
[NASA-CASE-XKS-04631] c10 N71-23663
- FLIGHT SIMULATORS**
- Centrifuge mounted motion simulator with elevator mechanism  
[NASA-CASE-XAC-00399] c11 N70-34815
- Table structure and rotating magnet system simulating gravitational forces on spacecraft and displaying trajectories between Earth, Venus, and Mercury  
[NASA-CASE-XNP-00708] c14 N70-35394
- Wind tunnel test section for simulating high Reynolds number over transonic speed range  
[NASA-CASE-MFS-20509] c11 N72-17183
- Development of flight simulator system to show position of joystick displacement  
[NASA-CASE-NFC-11497] c08 N73-25206
- Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c09 N74-30597
- Vehicle simulator binocular multiplanar visual display system  
[NASA-CASE-ARC-10808-1] c09 N76-24280
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c09 N78-18083
- Chromatically corrected virtual image display --- lens design for flight simulators  
[NASA-CASE-LAR-12251-1] c74 N79-14892
- Seat, cushion to provide realistic acceleration cues to aircraft simulator pilot  
[NASA-CASE-LAR-12149-2] c09 N79-31228
- Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c74 N80-27185
- Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c36 N81-19439
- Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c54 N81-27806



- Biocentrifuge system capable of exchanging specimen cages while in operational mode  
[NASA-CASE-MFS-23825-1] c51 N81-32829
- FLIGHT TESTS**  
Device for measuring drag forces in flight tests  
[NASA-CASE-XLA-00113] c14 N70-33386
- FLIGHT VEHICLES**  
Construction of leading edges of surfaces for aerial vehicles performing from subsonic to above transonic speeds  
[NASA-CASE-XLA-01486] c01 N71-23497  
Electro-optical attitude sensing device for landing approach of flight vehicle  
[NASA-CASE-XMS-01994-1] c14 N72-17326
- FLIP-FLOPS**  
Bistable multivibrator circuits operating at high speed and low power dissipation  
[NASA-CASE-XGS-00823] c10 N71-15910  
Stepping motor control apparatus exciting windings in proper time sequence to cause motor to rotate in either direction  
[NASA-CASE-GSC-10366-1] c10 N71-18772  
Interrogator and current driver circuit for combination with transistor flip-flop circuit  
[NASA-CASE-XGS-03058] c10 N71-19547
- FLOATING**  
Floating baffle for tank drain  
[NASA-CASE-KSC-10639] c15 N73-26472  
Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c54 N74-14845  
Floating nut retention system  
[NASA-CASE-MSC-16938-1] c37 N80-23653
- FLOATS**  
Magnetically centered liquid column float  
[NASA-CASE-XAC-00030] c14 N70-34820
- FLOTATION**  
Development and characteristics of rescue litter with inflatable flotation device for water rescue application  
[NASA-CASE-XMS-04170] c05 N71-22748
- FLOW CHAMBERS**  
Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c34 N78-17337
- FLOW DIRECTION INDICATORS**  
Electric circuit for reversing direction of current flow  
[NASA-CASE-XNP-00952] c10 N71-23271  
Flow angle sensor and remote readout system for use with cryogenic fluids  
[NASA-CASE-XLE-04503] c14 N71-24864  
Directional flow sensor  
[NASA-CASE-FRC-11074-1] c35 N82-11436
- FLOW DISTRIBUTION**  
Multiple orifice fluid flow control valve to provide different flow patterns  
[NASA-CASE-ERC-10208] c15 N70-10867  
Photographing surface flow patterns on wind tunnel test models  
[NASA-CASE-XLA-01353] c14 N70-41366  
Color photointerpretation of interference colors reflected from thin film oil-coated components in moving gases for gas flow visualization  
[NASA-CASE-XMF-01779] c12 N71-20815  
Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c35 N75-16783  
Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c20 N76-14190  
Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c25 N82-11147
- FLOW MEASUREMENT**  
Collapsible flow test device for obstructed passages  
[NASA-CASE-XMS-04917] c14 N69-24257  
Mass flow meter containing beta source for measuring nonpolar liquid flow  
[NASA-CASE-MFS-20485] c14 N72-11365  
Instrument for measuring magnitude and direction of flow velocity in flow field  
[NASA-CASE-LAR-10855-1] c14 N73-13415  
Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c35 N75-30503  
Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c35 N77-24454  
Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c34 N79-12359
- Biomedical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c52 N81-24717  
Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c34 N81-26402  
Aeroelastic instability stoppers for wind-tunnel models  
[NASA-CASE-LAR-12720-1] c09 N81-31229
- FLOW REGULATORS**  
Antibacklash circuit for hydraulic drive system  
[NASA-CASE-XNP-01020] c03 N71-12260  
Tubular flow restrictor for gas flow control in pipeline  
[NASA-CASE-NFO-10117] c15 N71-15608  
Fluid flow control valve for regulating fluids in molecular quantities  
[NASA-CASE-XLE-00703] c15 N71-15967  
Control of gas flow from pressurized vessel by thermal expansion of metal plug  
[NASA-CASE-NPO-10298] c12 N71-17661  
Semitoroidal diaphragm cavitating flow control valve  
[NASA-CASE-XNF-09704] c12 N71-18615  
Describing device for changing flow rate of fluid in duct in response to change in temperature  
[NASA-CASE-MFS-14259] c15 N71-19213  
Pneumatic servoamplifier for controlling flow regulation  
[NASA-CASE-MSC-12121-1] c15 N71-27147  
Gas flow control device, including housing and input port  
[NASA-CASE-NPO-11479] c15 N73-13462  
Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c37 N77-28487  
Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c37 N78-24545  
Flow diverter valve and flow diversion method  
[NASA-CASE-HCN-00573-1] c37 N79-33468  
Biomedical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c52 N81-24717
- FLOW STABILITY**  
Detonation reaction engine comprising outer housing enclosing pair of inner walls for continuous flow  
[NASA-CASE-XMF-06926] c28 N71-22983  
Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c34 N74-27730  
Aeroelastic instability stoppers for wind-tunnel models  
[NASA-CASE-LAR-12720-1] c09 N81-31229
- FLOW VELOCITY**  
Continuous variation of propellant flow and thrust by application of liquid foam flow theory to injection orifice  
[NASA-CASE-XLE-00177] c28 N70-40367  
Measuring density of single and two-phase cryogenic fluids in rocket fuel tanks  
[NASA-CASE-XLE-00688] c14 N70-41330  
Device for adding water to high velocity exhaust jets to reduce velocity, noise, and temperature  
[NASA-CASE-XMF-01813] c28 N70-41582  
Positive displacement flowmeter for measuring extremely low flows of fluid with self calibrating features  
[NASA-CASE-XMF-02822] c14 N70-41994  
Zeta potential flowmeter for measuring very slow to very high flows  
[NASA-CASE-XNP-06509] c14 N71-23226  
Device for simultaneously determining density, velocity, and temperature of streaming gas  
[NASA-CASE-XLA-03375] c16 N71-24074  
Doppler shifted laser beam as fluid velocity sensor  
[NASA-CASE-XAC-10770-1] c16 N71-24828  
Flowmeters for sensing low fluid flow rate and pressure for application to respiration rate studies  
[NASA-CASE-FRC-10022] c12 N71-26546  
Force balanced throttle valve for fuel control in rocket engines  
[NASA-CASE-NPO-10808] c15 N71-27432  
Flow rate switch for detecting variations in fluid flow velocity through conduits of pressurized systems  
[NASA-CASE-NFO-10722] c09 N72-20199  
Instrument for measuring magnitude and direction of flow velocity in flow field  
[NASA-CASE-LAR-10855-1] c14 N73-13415

- Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c34 N74-27730
- Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c09 N75-12969
- Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c36 N76-14447
- System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c34 N77-27345
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c34 N79-12359
- Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c28 N81-33306
- Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c09 N82-11088
- FLOW VISUALIZATION**
- Method and apparatus for measuring shock layer radiation distribution about high velocity objects  
[NASA-CASE-XAC-C2970] c14 N69-39896
- Color photointerpretation of interference colors reflected from thin film oil-coated components in moving gases for gas flow visualization  
[NASA-CASE-XMF-01779] c12 N71-20815
- FLOWMETERS**
- Collapsible flow test device for obstructed passages  
[NASA-CASE-XMS-04917] c14 N69-24257
- Positive displacement flowmeter for measuring extremely low flows of fluid with self calibrating features  
[NASA-CASE-XMF-02822] c14 N70-41994
- Heated element sensor for fluid flow detection in thermal conductive conduit with adaptive means to determine flow rate and direction  
[NASA-CASE-MS-C-12084-1] c12 N71-17569
- Describing laser Doppler velocimeter for measuring mean velocity and turbulence of fluid flow  
[NASA-CASE-MFS-20386] c21 N71-19212
- Zeta potential flowmeter for measuring very slow to very high flows  
[NASA-CASE-XNF-06509] c14 N71-23226
- Flow meter for measuring stagnation pressure in boundary layer around high speed flight vehicle  
[NASA-CASE-XFR-02007] c12 N71-24692
- Doppler shifted laser beam as fluid velocity sensor  
[NASA-CASE-XAC-10770-1] c16 N71-24828
- Flowmeters for sensing low fluid flow rate and pressure for application to respiration rate studies  
[NASA-CASE-FRC-10022] c12 N71-26546
- Mass flow meter containing beta source for measuring nonpolar liquid flow  
[NASA-CASE-MFS-20485] c14 N72-11365
- Respiratory analysis system to determine gas flow rate and frequency of respiration and expiration cycles in real time  
[NASA-CASE-MS-C-13436-1] c05 N73-32015
- Low power electromagnetic flowmeter system producing zero output signal for zero flow  
[NASA-CASE-ARC-10362-1] c14 N73-32326
- Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c35 N74-21018
- Leak detector  
[NASA-CASE-MFS-21761-1] c35 N75-15931
- System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c34 N77-27345
- Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c34 N81-26402
- FLUID AMPLIFIERS**
- Fluid jet amplifier with fluid from jet nozzle deflected by inlet pressure  
[NASA-CASE-XLE-03512] c12 N69-21466
- Multiple vortex amplifier system as fluid valve  
[NASA-CASE-XMF-04709] c15 N71-15609
- Shear modulated fluid amplifier of high pressure hydraulic vortex amplifier type  
[NASA-CASE-MFS-10412] c12 N71-17578
- Development of vortex fluid amplifier for throttling rocket exhaust  
[NASA-CASE-LEW-10374-1] c28 N73-13773
- Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c33 N74-11050
- Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMF-05964-1] c20 N79-21124
- FLUID FILMS**
- Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c37 N74-21061
- Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c37 N76-15461
- Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c37 N76-22541
- FLUID FILTERS**
- Absorbent apparatus for separating gas from liquid-gas stream used in environmental control under zero gravity conditions  
[NASA-CASE-XMS-01492] c05 N70-41297
- Compact high pressure filter for rocket fuel lines  
[NASA-CASE-XNF-00732] c28 N70-41447
- Development of liquid separating system using capillary device connected to flexible bladder storage chamber  
[NASA-CASE-XMS-13052] c14 N71-20427
- Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c34 N75-26282
- Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MS-C-14273-1] c34 N75-33342
- Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c37 N76-14463
- Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c51 N78-22585
- Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MS-C-16841-1] c34 N79-24285
- FLUID FLOW**
- Fluid jet amplifier with fluid from jet nozzle deflected by inlet pressure  
[NASA-CASE-XLE-03512] c12 N69-21466
- Pneumatic system for cyclic control of fluid flow in pneumatic device  
[NASA-CASE-XMS-04843] c03 N69-21469
- Multiple orifice fluid flow control valve to provide different flow patterns  
[NASA-CASE-ERC-10208] c15 N70-10867
- Conical valve plug for use with reactive cryogenic fluids  
[NASA-CASE-XLE-00715] c15 N70-34859
- Pressure regulating system with high pressure fluid source, adapted to maintain constant downstream pressure  
[NASA-CASE-XNF-00450] c15 N70-38603
- Antiflutter check valve for use with high pressure fluid flow  
[NASA-CASE-XNF-01152] c15 N70-41811
- Inductive liquid level detection system  
[NASA-CASE-XLE-01609] c14 N71-10500
- Multiple vortex amplifier system as fluid valve  
[NASA-CASE-XMF-04709] c15 N71-15609
- Heated element sensor for fluid flow detection in thermal conductive conduit with adaptive means to determine flow rate and direction  
[NASA-CASE-MS-C-12084-1] c12 N71-17569
- Throttle valve for regulating fluid flow volume  
[NASA-CASE-XNF-09698] c15 N71-18580
- Photometric flow meter with comparator reference means  
[NASA-CASE-XGS-01331] c14 N71-22996
- Combination pressure transducer-calibrator assembly for measuring fluid  
[NASA-CASE-XNF-01660] c14 N71-23036
- Valve assembly for controlling simultaneously more than one fluid flow, and having stable qualities under loads  
[NASA-CASE-XMS-05890] c09 N71-23191
- Flowmeters for sensing low fluid flow rate and pressure for application to respiration rate studies  
[NASA-CASE-FRC-10022] c12 N71-26546
- Control valve for switching main stream of fluid from one stable position to another by means of electrohydrodynamic forces  
[NASA-CASE-NPO-10416] c12 N71-27332
- Fluid control jet amplifiers  
[NASA-CASE-XLE-09341] c12 N71-28741

- Mass flow meter containing beta source for measuring nonpolar liquid flow  
[NASA-CASE-MFS-20485] c14 N72-11365
- Flow rate switch for detecting variations in fluid flow velocity through conduits of pressurized systems  
[NASA-CASE-NPO-10722] c09 N72-20199
- Torsional disconnect device for releasably coupling distal ends of fluid conduits  
[NASA-CASE-NPO-10704] c15 N72-20445
- Capacitive tank gaging device for monitoring one constituent of two phase fluid by sensing dielectric constant  
[NASA-CASE-MFS-21629] c14 N72-22442
- Transferring liquid nitrogen through vacuum chamber to cryopanel  
[NASA-CASE-LAR-10031] c15 N72-22484
- Design and development of device to prevent geysering during convective circulation of cryogenic fluids  
[NASA-CASE-KSC-10615] c15 N73-12486
- Design and development of thermomechanical pump for transmitting warming fluid through fluid circuit to control temperature of spacecraft instrumentation  
[NASA-CASE-NPO-11417] c15 N73-24513
- Flow control valve --- for high temperature fluids  
[NASA-CASE-NPO-11951-1] c37 N74-21065
- Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c34 N74-27730
- Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c37 N75-19686
- Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c35 N75-30503
- Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MSC-14273-1] c34 N75-33342
- Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c36 N76-14447
- Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c37 N76-14460
- Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c34 N77-24423
- Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-16970-1] c36 N77-25501
- Accumulator  
[NASA-CASE-MFS-19287-1] c34 N77-30399
- Apparatus for measuring a scrubate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c35 N78-19465
- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c34 N78-25351
- Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c37 N78-25426
- Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c37 N79-11402
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c34 N79-12359
- Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c36 N81-19440
- FLUID INJECTION**
- Solid propellant ignition with hypergolic fluid injected to predetermined portions of propellant  
[NASA-CASE-XLE-00207] c28 N70-33375
- Method for igniting solid propellant rocket motors by injecting hypergolic fluids  
[NASA-CASE-XLE-01588] c27 N71-15634
- Constructing fluid spike nozzle to eliminate heat transfer and high temperature problems inherent in physical spikes  
[NASA-CASE-XGS-01143] c31 N71-15647
- Method and apparatus for producing fine particles in cryogenic liquid bath for gelled rocket propellants  
[NASA-CASE-NPO-10250] c23 N71-16212
- Fluid transferring system design for purging toxic, corrosive, or noxious fluids and fumes from materials handling equipment for cleansing and accident prevention  
[NASA-CASE-XMS-01905] c12 N71-21089
- Tertiary flow injection system for thrust vectoring of propulsive nozzle flow  
[NASA-CASE-MFS-20831] c28 N71-29153
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c52 N74-22771
- FLUID JETS**
- Directed fluid stream for propeller blade loading control  
[NASA-CASE-XAC-00139] c02 N70-34856
- FLUID LOGIC**
- Logic AND gate for fluid circuits  
[NASA-CASE-XLA-07391] c12 N71-17579
- FLUID MECHANICS**
- Fluid leakage detection system with automatic monitoring capability  
[NASA-CASE-LAR-10323-1] c12 N71-17573
- Development and characteristics of parallel plate viscometer for determination of absolute viscosity of liquids and viscoelastic materials  
[NASA-CASE-NPO-11387] c14 N73-14429
- Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c37 N82-12442
- FLUID POWER**
- Fluid power transmission and gas bearing system  
[NASA-CASE-XMS-01445] c12 N71-16031
- Low friction gas bearing system for fluid power transmission to bearing-supported payload  
[NASA-CASE-ERC-10097] c15 N71-28465
- FLUID PRESSURE**
- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c34 N78-25351
- Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c37 N81-24442
- FLUID ROTOR GYROSCOPES**
- Piezoelectric pump for supplying fluid at high frequencies to gyroscope fluid suspension system  
[NASA-CASE-XNE-05429] c26 N71-21824
- FLUID SWITCHING ELEMENTS**
- Two phase fluid pressurization system for propellant tank  
[NASA-CASE-MSC-12390] c27 N71-29155
- FLUID TRANSMISSION LINES**
- Low heat leak connector for cryogenic system  
[NASA-CASE-XLF-02367-1] c31 N79-21225
- FLUIDIC CIRCUITS**
- Using molds for fabricating individual fluid circuit components  
[NASA-CASE-XLA-07829] c15 N72-16329
- Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c35 N75-30503
- FLUIDICS**
- Fluidic-thermochromic display device  
[NASA-CASE-ERC-10031] c12 N71-18603
- Plasma-fluidic hybrid display system combining high brightness and memory characteristics  
[NASA-CASE-ERC-10100] c09 N71-33519
- Continuous gas flow control by fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c28 N72-22769
- Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c33 N74-11050
- Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c37 N78-25426
- FLUIDIZED BED PROCESSORS**
- Continuous coal processing method  
[NASA-CASE-NFO-13758-2] c31 N81-15154
- Fluidized bed coal combustion reactor  
[NASA-CASE-NFO-14273-1] c25 N82-11144
- FLUIDS**
- Automated fluid chemical analyzer for microchemical analysis of small quantities of liquids by use of selected reagents and analyzer units  
[NASA-CASE-XNP-09451] c06 N71-26754
- Detection of bacteria in biological fluids and foods  
[NASA-CASE-GSC-11533-1] c14 N73-13435
- Fluid polydimethylsiloxane resin with low outgassing properties in cured state  
[NASA-CASE-GSC-11358-1] c06 N73-26100
- Fluid mass sensor for a zero gravity environment  
[NASA-CASE-MSC-14653-1] c35 N77-19385
- FLUORESCENCE**
- Spectrophotofluorometer with 3-dimensional display to identify fluorescence spectra of carcinogenic and noncarcinogenic hydrocarbons  
[NASA-CASE-XGS-01231] c14 N70-41676

- Sealed fluorescent tube light unit capable of connection with other units to form string of work lights  
[NASA-CASE-XKS-05932] c09 N71-26787
- Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ABC-10633-1] c25 N74-26947
- Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c45 N75-27585
- Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c74 N81-24900
- FLUORIDES**
- Self lubricating fluoride-metal composite materials for outer space applications  
[NASA-CASE-XLB-06511] c18 N71-23710
- Development of fluoride coating to prevent oxidation of beryllium surfaces at elevated temperatures  
[NASA-CASE-LEW-10327] c17 N71-33408
- Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c06 N72-20121
- FLUORINATION**
- Fluorinated polyurethanes produced by reacting hydroxy terminated perfluoro polyether with diisocyanate  
[NASA-CASE-NPO-10767-2] c06 N72-27151
- Fluorinated esters of polycarboxylic acid and lubricating compositions for use at extreme temperature  
[NASA-CASE-MFS-21040-1] c06 N73-30098
- FLUORINE**
- Reaction of polyperfluoroclyenes with fluorine to produce saturated polymer chain or create reactive sites on chain  
[NASA-CASE-NPO-10862] c06 N72-22107
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c27 N81-17259
- FLUORINE COMPOUNDS**
- Fluorine-containing polyformals  
[NASA-CASE-XMF-06900-1] c27 N79-21191
- FLUORO COMPOUNDS**
- Synthesis of polyfluorobutadiene by polymerization of perfluorobutadiene with diisopropyl peroxydicarbonate  
[NASA-CASE-NPO-10863] c06 N70-11251
- Low pressure perfluorobutadiene polymerization with peroxide catalysts  
[NASA-CASE-NPO-10447] c06 N70-11252
- Preparation of fluoroalcohol ethers by reacting fluoroalkylene oxides with alkali salt of polyfluoroalkylene diol  
[NASA-CASE-MFS-10507] c06 N73-30101
- Preparation of fluorinated polyethers from 2-hydro-perhaloisopropyl alcohols  
[NASA-CASE-MFS-11492] c06 N73-30102
- Chemical and elastic properties of fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c06 N73-33076
- Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c27 N76-16228
- FLUOROCARBONS**
- Electrically conductive fluorocarbon polymers  
[NASA-CASE-XLE-06774-2] c06 N72-25150
- FLUOROPOLYMERS**
- Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c25 N81-14016
- Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c31 N81-16327
- FLUTTER**
- Antiflutter check valve for use with high pressure fluid flow  
[NASA-CASE-XNP-01152] c15 N70-41811
- Development of aerodynamic control system to control flutter over large range of oscillatory frequencies using stability augmentation techniques  
[NASA-CASE-LAR-10682-1] c02 N73-26004
- Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c08 N80-22359
- FLUX (RATE)**
- Fluxgate magnetometer for measuring magnetic field along two axes using one sensor  
[NASA-CASE-GSC-10441-1] c14 N71-27325
- FLOX DENSITY**
- Particle beam power density detection and measurement apparatus  
[NASA-CASE-XLF-00243] c14 N70-38602
- FLUXES**
- Hydrazine monoperfluoro alkanoate solder flux leaving corrosion resistant coating, for metals such as copper  
[NASA-CASE-XNP-03459-2] c18 N71-15688
- Metal soldering with hydrazine monoperfluoro alkanoate for corrosion resistant coatings  
[NASA-CASE-XNP-03459] c15 N71-21078
- FLYWHEELS**
- Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c44 N78-24608
- Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c37 N79-10422
- Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HCN-10888-1] c44 N79-14527
- Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c24 N81-29163
- FOAMS**
- Plastic foam generator for space vehicle instrument payload package flotation in water landing  
[NASA-CASE-XLA-00838] c03 N70-36778
- Continuous variation of propellant flow and thrust by application of liquid foam flow theory to injection orifice  
[NASA-CASE-XLF-00177] c28 N70-40367
- Development of foam insulation for filament wound cryogenic storage tank  
[NASA-CASE-XLF-03803] c15 N71-23816
- Carboxyl terminated polyester prepolymers and foams produced from prepolymers and materials  
[NASA-CASE-NPO-10596] c06 N71-25929
- Storage stable, thermally activated foaming compositions for erecting and rigidizing mechanisms of thin sheet solar collectors  
[NASA-CASE-LAR-10373-1] c18 N71-26155
- Method of making solid propellant rocket motor having reliable high altitude capabilities, long shelf life, and capable of firing with nozzle closure with foamed plastic permanent mandrel  
[NASA-CASE-XLA-04126] c28 N71-26779
- Foam insulation thickness measuring and injection device for spacecraft applications  
[NASA-CASE-MFS-20261] c14 N71-27005
- Description of method for making homogeneous foamed materials in weightless environment using materials having different physical properties  
[NASA-CASE-XMF-09902] c15 N72-11387
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c27 N74-12812
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c27 N74-27037
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215
- Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c25 N80-16116
- FOCI**
- Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c32 N82-10287
- FOCUSING**
- X ray collimating structure for focusing radiation directly onto detector  
[NASA-CASE-XHQ-04106] c14 N70-40240
- Apertured electrode focusing system for ion sources with nonuniform plasma density  
[NASA-CASE-XNP-03332] c09 N71-10618
- Development and characteristics of Petzval type objective including field shaping lens for focusing light of specified wavelength band on curved photoreceptor  
[NASA-CASE-GSC-10700] c23 N71-30027

- Absolute focus locking device for microscopes to maintain set focus for extended time period  
[NASA-CASE-LAR-10184] c14 N72-22445
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c33 N74-10195
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014
- Multiplate focusing collimator --- for scanning small near radiation sources  
[NASA-CASE-MFS-20932-1] c35 N75-19616
- RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NFO-13821-1] c44 N78-28594
- Gyrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c33 N81-16384
- FOG**
- Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c23 N75-14834
- FOILS (MATERIALS)**
- Foil seal between parts moving relative to each other  
[NASA-CASE-XLE-05130] c15 N69-21362
- Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c24 N75-33181
- Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c24 N81-14000
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c24 N81-33235
- FOLDING**
- Characteristics of device for folding thin flexible sheets into compact configuration  
[NASA-CASE-XLA-00137] c15 N70-33180
- FOLDING STRUCTURES**
- Lenticular vehicle with foldable aerodynamic control flaps and reaction jets for operation above and within earth's atmosphere  
[NASA-CASE-XGS-00260] c31 N70-37924
- Collapsible, space erectable loop antenna system for space vehicle  
[NASA-CASE-XMF-00437] c07 N70-40202
- Unfolding boom assembly with knuckle joints for positioning equipment for spacecraft  
[NASA-CASE-XGS-00938] c32 N70-41367
- Foldable conduit capable of springing back as self erecting structural member  
[NASA-CASE-XLE-00620] c32 N70-41579
- Foldable, double concave and parabolic reflector system for solar ray concentration  
[NASA-CASE-XLA-04622] c03 N70-41580
- Method for deployment of flexible wing glider from space vehicle with minimum impact and loading  
[NASA-CASE-XMS-00907] c02 N70-41630
- Development and characteristics of variable sweep wing control system for supersonic aircraft  
[NASA-CASE-XLA-03659] c02 N71-11041
- Hydraulic actuator design for space deployment of heat radiators  
[NASA-CASE-MSC-11817-1] c15 N71-26611
- Apparatus and method of assembling building blocks by folding pre-cut flat sheets of material during on-site construction  
[NASA-CASE-MSC-12233-1] c15 N72-25454
- Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c18 N75-27040
- Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c32 N80-29539
- Foldable beam  
[NASA-CASE-LAR-12077-1] c31 N81-25259
- Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c31 N81-27324
- FOOD**
- Detection of bacteria in biological fluids and foods  
[NASA-CASE-GSC-11533-1] c14 N73-13435
- FORCE**
- Electromechanical actuator for producing mechanical force and/or motion in response to electrical signals  
[NASA-CASE-NPO-11738-1] c09 N73-30185
- FORCE DISTRIBUTION**
- Device for handling heavy loads by distributing forces  
[NASA-CASE-XNF-04969] c11 N69-27466
- Development of two force component measuring device  
[NASA-CASE-XAC-04886-1] c14 N71-20439
- Tensile strength testing device having pulley guides for exerting multiple forces on test specimen  
[NASA-CASE-XNF-05634] c15 N71-24834
- Development and characteristics of device for indicating and recording magnitude of force applied in axial direction  
[NASA-CASE-MSC-15626-1] c14 N72-25411
- Variable direction force coupler for transmitting force along selectable curve path  
[NASA-CASE-MFS-20317] c15 N73-13463
- Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c33 N75-31329
- FORCED VIBRATION**
- Seismic vibration source  
[NASA-CASE-NPC-14112-1] c46 N79-22679
- FOREBODIES**
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c02 N81-14968
- FORMALDEHYDE**
- An improved synthesis of 2,4,8,10-tetroxaspiro (5.5) undecane  
[NASA-CASE-ARC-11243-2] c23 N80-31472
- Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c23 N82-16174
- FORMAT**
- Digital data reformatter/deserializer  
[NASA-CASE-NFO-13676-1] c60 N79-20751
- FORMATES**
- Preparation of polyurethane polymer by reacting hydroxy polyformal with organic diisocyanate  
[NASA-CASE-MFS-10509] c06 N73-30103
- FORMING TECHNIQUES**
- Apparatus for forming wire grids for electric strain gages  
[NASA-CASE-XLE-00023] c15 N70-33330
- Hot forming of plastic sheets  
[NASA-CASE-XMS-05516] c15 N71-17803
- Forming tubes from long thin flat metal strips  
[NASA-CASE-XGS-04175] c15 N71-18579
- Portable magnetomotive hammer for metal working  
[NASA-CASE-XMF-03793] c15 N71-24833
- Forming mold for polishing and machining curved solar magnesium reflector with reinforcing ribs  
[NASA-CASE-XLE-08917-2] c15 N71-24836
- Heat treatment and tooling for forming shapes from thermosetting honeycomb core sheets  
[NASA-CASE-NFO-11036] c15 N72-24522
- Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c26 N74-10521
- Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c31 N74-32920
- Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c37 N75-26371
- Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c37 N75-31446
- Apparatus for forming dish ion thruster grids  
[NASA-CASE-LEW-11694-2] c37 N76-14461
- Acoustic energy shaping  
[NASA-CASE-NPO-13802-1] c71 N78-10837
- Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c37 N78-13436
- Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c26 N78-24333
- Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c44 N79-31752
- Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPC-14596-1] c31 N81-33319
- FOUNDATIONS**
- Base support for expandable and contractible coupling between two members  
[NASA-CASE-NFO-11059] c15 N72-17454
- Adjustable securing base  
[NASA-CASE-MSC-19666-1] c37 N78-17383

**FOURIER TRANSFORMATION**

Continuous Fourier transform method and apparatus  
--- for the analysis of simultaneous analog  
signal components  
[NASA-CASE-ARC-10466-1] c60 N75-13539

**FRACTIONATION**

Purification apparatus for vaporization and  
fractional distillation of liquids  
[NASA-CASE-XNP-08124] c15 N71-27184  
Electrophoretic fractional elution apparatus  
employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c37 N80-14397  
Electrophoresis device  
[NASA-CASE-MFS-25426-1] c25 N81-29179

**FRACTURE MECHANICS**

Apparatus for testing metallic and nonmetallic  
beams or rods by bending at high temperatures  
in vacuum or inert atmosphere  
[NASA-CASE-XLE-01300] c15 N70-41593

**FRACTURE STRENGTH**

Process for making a high toughness-high  
strength iron alloy  
[NASA-CASE-LEW-12542-2] c26 N79-22271  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c26 N80-32484  
Method of making a partial interlaminar  
separation composite system  
[NASA-CASE-LAR-12065-2] c24 N81-33235

**FRAME PHOTOGRAPHY**

Film advance indicator  
[NASA-CASE-LAR-12474-1] c35 N80-31774

**FRAMES**

Shock absorbing articulated multiple couch  
assembly  
[NASA-CASE-MSC-11253] c05 N71-12343  
Pliable frame for sunglasses in emergency  
survival kits  
[NASA-CASE-XMS-06064] c05 N71-23096  
Expandable space frames with high expansion to  
collapse ratio  
[NASA-CASE-ERC-10365-1] c31 N73-32749

**FRAMING CAMERAS**

High speed photo-optical time recorder for  
indicating time at exposure of each frame of  
high speed movie camera film  
[NASA-CASE-KSC-10294] c14 N72-18411

**FREE FLIGHT TEST APPARATUS**

Hydraulic support equipment for full scale  
dynamic testing of large rocket vehicle under  
free flight conditions  
[NASA-CASE-XMF-01772] c11 N70-41677  
Hydraulic support apparatus for dynamic testing  
of space vehicles under near-free flight  
conditions  
[NASA-CASE-XMF-03248] c11 N71-10604  
Free flight suspension system for use with  
aircraft models in wind tunnel tests  
[NASA-CASE-XLA-00939] c11 N71-15926

**FREE WING AIRCRAFT**

Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c05 N79-12061

**FREEZE DRYING**

Rice preparation process consisting of cooking,  
two freezing-thawing cycles, and then freeze  
drying  
[NASA-CASE-MSC-13540-1] c05 N72-33096

**FREEZING**

System for and method of freezing biological  
tissue  
[NASA-CASE-GSC-12173-1] c51 N79-10694  
Method of forming frozen spheres in a force-free  
drop tower --- microballcons for inertial  
confinement fusion  
[NASA-CASE-NFO-14845-1] c31 N81-16328

**FREON**

Solar energy power system --- using Freon  
[NASA-CASE-MFS-21628-1] c44 N75-32581

**FREQUENCIES**

Controlled oscillator system with a time  
dependent output frequency  
[NASA-CASE-NFO-11962-1] c33 N74-10194  
High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c32 N74-20863

**FREQUENCY ANALYZERS**

Describing frequency discriminator using digital  
logic circuits and supplying single binary  
output signal  
[NASA-CASE-MFS-14322] c08 N71-18692

Broadband frequency discriminator with resistive  
captive inductive networks  
[NASA-CASE-NFO-10096] c07 N71-24583

Audio frequency analysis circuit for  
determining, displaying, and recording  
frequency of sweeping audio frequency signal  
[NASA-CASE-NPC-11147] c14 N72-27408

Continuous Fourier transform method and apparatus  
--- for the analysis of simultaneous analog  
signal components

[NASA-CASE-ARC-10466-1] c60 N75-13539  
Frequency discriminator and phase detector circuit  
[NASA-CASE-NFO-11515-1] c33 N77-13315

Frequency tracked pulse technique for ultrasonic  
analysis  
[NASA-CASE-LAR-12697-1] c32 N80-26571

**FREQUENCY CONTROL**

Automatic control of voltage supply to direct  
current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39987

Variable frequency magnetic coupled  
multivibrator with temperature compensated  
frequency control circuit  
[NASA-CASE-XGS-00458] c09 N70-38604

Variable frequency magnetic coupled  
multivibrator with output signal of constant  
amplitude and waveform  
[NASA-CASE-XGS-00131] c09 N70-38995

Development of automatic frequency  
discriminators and control for phase lock loop  
providing frequency preset capabilities  
[NASA-CASE-XMF-08665] c10 N71-19467

Linear accelerator frequency control system  
[NASA-CASE-XGS-05441] c10 N71-22962  
Tuning arrangement for frequency control of  
magnetron-type electron discharge device  
[NASA-CASE-XNP-09771] c09 N71-24841

Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c32 N74-11000  
Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c32 N74-19790

Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c36 N75-31427  
Reflex feed system for dual frequency antenna  
with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c32 N78-31321

Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c07 N79-14095  
Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c33 N81-17349

High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c33 N81-31482

**FREQUENCY CONVERTERS**

Frequency to analog converters with unipolar  
field effect transistor for determining  
potential charge by pulse duration of input  
signal  
[NASA-CASE-XNF-07040] c08 N71-12500

Describing static inverter with single or  
multiple phase output  
[NASA-CASE-XMF-00663] c08 N71-18752  
Voltage controlled, variable frequency  
relaxation oscillator with MOSFET variable  
current feed  
[NASA-CASE-GSC-10022-1] c10 N71-25882

Development of family of frequency to amplitude  
converters for frequency analysis of complex  
input signal waveforms  
[NASA-CASE-MSC-12395] c09 N72-25257

Variable frequency inverter for ac induction  
motors with torque, speed and braking control  
[NASA-CASE-MFS-22088-1] c33 N75-15874

**FREQUENCY DISCRIMINATORS**

PN lock indicator for dithered PN code tracking  
loop  
[NASA-CASE-NPO-14435-1] c33 N81-33405

**FREQUENCY DISTRIBUTION**

Monopole antenna system for maximum  
omnidirectional efficiency for use on satellites  
[NASA-CASE-XLA-00414] c07 N70-38200

Variable frequency subcarrier oscillator with  
temperature compensation  
[NASA-CASE-XNP-03916] c09 N71-28810

Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c32 N78-15323

**FREQUENCY DIVIDERS**

Low phase noise frequency divider for use with  
deep space network communication system  
[NASA-CASE-NPO-11569] c10 N73-26229

- Technique for extending the frequency range of digital dividers  
[NASA-CASE-LAR-10730-1] c33 N74-10223
- Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c33 N75-31330
- Electronic analog divider  
[NASA-CASE-LFW-11881-1] c33 N77-17354
- Unequal split microwave power divider  
[NASA-CASE-LAR-12889-1] c33 N81-31483
- FREQUENCY DIVISION MULTIPLEXING**
- Earth satellite relay station for frequency multiplexed voice transmission  
[NASA-CASE-GSC-10118-1] c67 N71-24621
- System for monitoring condition responsive devices by using frequency division multiplex technique  
[NASA-CASE-KSC-10521] c67 N73-20176
- FREQUENCY MEASUREMENT**
- Measurement system for physical quantity represented by or converted to variable frequency signal  
[NASA-CASE-MFS-20658-1] c14 N73-30386
- Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c33 N76-16331
- Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c33 N79-10338
- FREQUENCY MODULATION**
- Accelerometer with FM output signals indicative of mechanical strain on it  
[NASA-CASE-XLA-00492] c14 N70-34799
- Circuitry for generating sync signals in FM communication systems including video information  
[NASA-CASE-XNP-10830] c07 N71-11281
- Demodulator for simultaneous demodulation of two modulating ac signal carriers close in frequency  
[NASA-CASE-XMP-01160] c07 N71-11298
- Optical tracker with pair of FM reticles having patterns 90 deg out of phase  
[NASA-CASE-XGS-05715] c23 N71-16100
- Atomic hydrogen maser with bulb temperature control by output frequency difference signal for wall shift elimination  
[NASA-CASE-HGN-10654-1] c16 N73-13489
- Device for locating electrically nonlinear objects and determining distance to object by FM signal transmission  
[NASA-CASE-KSC-10108] c14 N73-25461
- Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c32 N74-19790
- Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c33 N75-31330
- Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c33 N77-17351
- FM/CW radar system  
[NASA-CASE-DFS-22234-1] c32 N79-10264
- Thickness measurement system  
[NASA-CASE-MFS-23721-1] c31 N79-28370
- Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c32 N80-24510
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c33 N81-31480
- FREQUENCY MULTIPLIERS**
- Multiple varactor for generating high frequencies with high power and high conversion efficiency  
[NASA-CASE-XMF-04958-1] c10 N71-26414
- Open loop digital frequency multiplier  
[NASA-CASE-MSC-12709-1] c33 N77-24375
- FREQUENCY RANGES**
- Variable time constant, wide frequency range smoothing network for pulse removal from pulse chains  
[NASA-CASE-XGS-01983] c10 N70-41964
- Variable frequency nuclear magnetic resonance spectrometer providing drive signals over wide frequency range and minimizing noise effects  
[NASA-CASE-XNP-09830] c14 N71-26266
- Technique for extending the frequency range of digital dividers  
[NASA-CASE-LAR-10730-1] c33 N74-10223
- Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c32 N76-14321
- Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NFO-13753-1] c32 N77-20289
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c32 N79-19195
- FREQUENCY SCANNING**
- Automatic communication signal monitoring system  
[NASA-CASE-NFC-13941-1] c32 N79-10262
- Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NFO-14311-1] c32 N79-14276
- Frequency-scanning particle size spectrometer  
[NASA-CASE-NPO-13606-2] c35 N80-18364
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c32 N81-27341
- FREQUENCY SHIFT**
- Doppler frequency shift correction device for multiplex communication with Applications Technology Satellites  
[NASA-CASE-XGS-02749] c07 N69-39978
- Serrodyne traveling wave tube reentrant amplifier for synchronous communication satellites operating at microwave frequencies  
[NASA-CASE-XGS-01022] c07 N71-16088
- Multiplexed communication system design including automatic correction of transmission errors introduced by frequency spectrum shifts  
[NASA-CASE-XNP-01306] c07 N71-20814
- Doppler shifted laser beam as fluid velocity sensor  
[NASA-CASE-XAC-10770-1] c16 N71-24828
- Laser Doppler velocity simulator --- to induce frequency shift  
[NASA-CASE-LAR-12176-1] c36 N80-16321
- FREQUENCY SHIFT KEYING**
- Frequency shift keyed demodulator - circuit diagrams  
[NASA-CASE-XGS-02889] c07 N71-11282
- Frequency shift keying apparatus for use with pulse code modulation data transmission system  
[NASA-CASE-XGS-01537] c07 N71-23405
- FREQUENCY STABILITY**
- Gas laser frequency stabilized by position of mirrors in resonant cavity  
[NASA-CASE-XGS-03644] c16 N71-18614
- Solid state broadband stable power amplifier  
[NASA-CASE-XNP-10854] c10 N71-26331
- FREQUENCY STANDARDS**
- Development of method for synchronizing clocks at several ground stations based on signals received from spacecraft or satellites  
[NASA-CASE-XNP-08875] c10 N71-23099
- Atomic standard with variable storage volume  
[NASA-CASE-GSC-11895-1] c35 N76-15436
- Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c32 N78-15323
- External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c36 N79-14362
- Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c32 N81-14186
- FREQUENCY SYNCHRONIZATION**
- Synchronized digital communication system  
[NASA-CASE-XNP-03623] c09 N73-28084
- Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c32 N78-15323
- System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c32 N79-20296
- FREQUENCY SYNTHESIZERS**
- Digitally controlled frequency synthesizer for pulse frequency modulation telemetry systems  
[NASA-CASE-XGS-02317] c09 N71-23525
- System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c32 N79-20296
- FRICTION FACTOR**
- Self lubricating gears and other mechanical parts having surface adapted to frictional contact  
[NASA-CASE-MFS-14971] c15 N71-24984
- FRICTION MEASUREMENT**
- Kinetic and static friction force measurement between magnetic tape and magnetic head surfaces  
[NASA-CASE-XNP-08680] c14 N71-22995
- Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c35 N76-31489
- FRICTION REDUCTION**
- Development of low friction magnetic recording



- tape  
[NASA-CASE-XGS-0C373] c23 N71-15978
- Hollow high strength rolling elements for  
antifriction bearings fabricated from  
preformed components  
[NASA-CASE-LEW-11026-1] c15 N73-33383
- FRICTIONLESS ENVIRONMENTS**
- Air bearings for near frictionless transfer of  
loads from one body to another  
[NASA-CASE-XMF-01887] c15 N71-10617
- Platform with several ground effect pads and  
plenum chambers  
[NASA-CASE-MFS-14685] c31 N71-15689
- Development of apparatus for simulating zero  
gravity conditions  
[NASA-CASE-MFS-12750] c27 N71-16223
- FROST**
- Insulating system for receptacles of liquefied  
gases using wire cloth for forming frost layer  
[NASA-CASE-XMF-00341] c15 N70-33323
- FUEL CELLS**
- Inorganic ion exchange membrane electrolytes for  
fuel cell use  
[NASA-CASE-XNP-04264] c03 N69-21337
- Operation method for combined electrolysis  
device and fuel cell using molten salt to  
produce power by thermoelectric regeneration  
mechanism  
[NASA-CASE-XLE-01645] c03 N71-20904
- Electrode sealing and insulation for fuel cells  
containing caustic liquid electrolytes using  
powdered plastic and metal  
[NASA-CASE-XMS-01625] c15 N71-23022
- Development and characteristics of ion-exchange  
membrane and electrode assembly for fuel cells  
or electrolysis cells  
[NASA-CASE-XMS-02063] c03 N71-29044
- Reconstituted asbestos matrix --- for use in  
fuel or electrolysis cells  
[NASA-CASE-MSC-12568-1] c24 N76-14204
- Dual membrane hollow fiber fuel cell and method  
of operating same  
[NASA-CASE-NPO-13732-1] c44 N79-10513
- FUEL COMBUSTION**
- Fuel combustor  
[NASA-CASE-LEW-12137-1] c25 N78-10224
- FUEL CONTROL**
- Attitude and propellant flow control system for  
liquid propellant rocket vehicles  
[NASA-CASE-XMF-00185] c21 N70-34539
- Flexible ring slosh damping baffle for  
spacecraft fuel tank  
[NASA-CASE-LAR-10317-1] c32 N71-16103
- Submerged fuel tank baffles to prevent sloshing  
in liquid propellant rocket flight  
[NASA-CASE-XLA-04605] c32 N71-16106
- Control valve and coaxial variable injector for  
controlling bipropellant mixture ratio and flow  
[NASA-CASE-XNP-09702] c15 N71-17654
- Force balanced throttle valve for fuel control  
in rocket engines  
[NASA-CASE-NFO-10808] c15 N71-27432
- Variable-orifice hydraulic mechanism for  
aircraft gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c28 N73-19793
- Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c37 N78-24545
- Electrical servo actuator bracket --- fuel  
control valves on jet engines  
[NASA-CASE-FRC-11044-1] c37 N81-33483
- FUEL FLOW**
- Development of system for preheating vaporized  
fuel for use with internal combustion engines  
[NASA-CASE-NFO-12072] c28 N72-22772
- FUEL FLOW REGULATORS**
- Solenoid two-step valve for bipropellant flow  
rate control to rocket engine  
[NASA-CASE-XMS-04890-1] c15 N70-22192
- Water electrolysis rocket engine with self-  
regulating stoichiometric fuel mixing regulator  
[NASA-CASE-XGS-08729] c28 N71-14044
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c07 N77-23106
- FUEL GAGES**
- Response analyzing apparatus for liquid vapor  
interface sensor of sloshing rocket propellant  
[NASA-CASE-MFS-11204] c14 N71-29134
- FUEL INJECTION**
- Apparatus for cooling and injecting hypergolic  
propellants into combustion chamber of small  
rocket engine  
[NASA-CASE-XLE-00303] c15 N70-36535
- Fuel injection system for maximum combustion  
efficiency of rocket engines  
[NASA-CASE-XLE-00111] c28 N70-38199
- Propellant injection assembly having  
individually removable and replaceable nozzles  
for liquid fueled rocket engines  
[NASA-CASE-XMF-00968] c28 N71-15660
- Fuel and oxidizer injection head for thrust  
chamber of reaction engine  
[NASA-CASE-NPO-10046] c28 N72-17843
- Improved injector with porous plug for bubbles  
of gas into feed lines of electrically  
conductive liquid  
[NASA-CASE-NPO-11377] c15 N73-27406
- Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c07 N81-29129
- FUEL OILS**
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c07 N77-23106
- FUEL PUMPS**
- Variable displacement fuel pump for internal  
combustion engines  
[NASA-CASE-MSC-12139-1] c28 N71-14058
- FUEL SYSTEMS**
- Internal labyrinth and shield structure to  
improve electrical isolation of propellant  
feed source from ion thruster  
[NASA-CASE-LEW-10210-1] c28 N71-26781
- Development of system for preheating vaporized  
fuel for use with internal combustion engines  
[NASA-CASE-NPO-12072] c28 N72-22772
- Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c20 N74-13502
- Fuel combustor  
[NASA-CASE-LEW-12137-1] c25 N78-10224
- Fuel delivery system including heat exchanger  
means  
[NASA-CASE-LEW-12793-1] c37 N79-11403
- Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c07 N81-29129
- FUEL TANK PRESSURIZATION**
- Fuel tank pressure-relief device for venting  
cryogenic liquid vapors through tubes with  
porous plug  
[NASA-CASE-XLE-00288] c15 N70-34247
- Automatically reciprocating, high pressure pump  
for use in spacecraft cryogenic propellants  
[NASA-CASE-XNP-04731] c15 N71-24042
- Method and apparatus for pressurizing propellant  
tanks used in propulsion motor feed system  
[NASA-CASE-XNP-00650] c27 N71-28929
- FUEL TANKS**
- Reduced gravity liquid configuration simulator  
to study propellant behavior in rocket fuel  
tanks  
[NASA-CASE-XLE-02624] c12 N69-39988
- Flexible ring slosh damping baffle for  
spacecraft fuel tank  
[NASA-CASE-LAR-10317-1] c32 N71-16103
- Submerged fuel tank baffles to prevent sloshing  
in liquid propellant rocket flight  
[NASA-CASE-XLA-04605] c32 N71-16106
- Pressure sensor network for measuring liquid  
dynamic response in flight including fuel tank  
acceleration, liquid slosh amplitude, and fuel  
depth monitoring  
[NASA-CASE-XLA-05541] c12 N71-26387
- Electrical failure detector in solid rocket  
propellant motor insulation against thermal  
degradation by fuel grain  
[NASA-CASE-XMF-03968] c14 N71-27186
- FUEL VALVES**
- Apparatus for cooling and injecting hypergolic  
propellants into combustion chamber of small  
rocket engine  
[NASA-CASE-XLE-00303] c15 N70-36535
- Semitoroidal diaphragm cavitating flow control  
valve  
[NASA-CASE-XNP-09704] c12 N71-18615
- Filler valve design for supplying liquid  
propellants at high pressure to space vehicles  
[NASA-CASE-XNP-01747] c15 N71-23024
- Combination automatic-starting electrical plasma  
torch and gas shutoff valve --- for satellite  
attitude control  
[NASA-CASE-XLE-10717] c37 N75-29426

## FUELS

Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c28 N81-14103

## FUNCTION GENERATORS

Mechanical function generators with potentiometer as sensing element  
[NASA-CASE-XAC-00001] c15 N71-28952  
Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c08 N72-20176  
Service life of electromechanical device for generating sine/cosine functions  
[NASA-CASE-LAR-10503-1] c09 N72-21248  
Function generators for producing complex vibration mode patterns used to identify vibration mode data  
[NASA-CASE-LAR-10310-1] c10 N73-20253  
Integrated circuit tangent function generator  
[NASA-CASE-MSC-13907-1] c10 N73-26230

## FURABLE ANTENNAS

Development and characteristics of extensible dipole antenna using deformable tubular metallic strip element  
[NASA-CASE-HQN-00937] c07 N71-28979  
Furlable antenna for spacecraft  
[NASA-CASE-NPO-11361] c07 N72-32169  
Furlable antenna --- antenna design  
[NASA-CASE-NPO-13553-1] c33 N76-32457

## FURNACES

High speed infrared furnace  
[NASA-CASE-XLE-10466] c17 N69-25147  
Development of black-body source calibration furnace  
[NASA-CASE-XLE-01399] c33 N71-15625  
Induction heating of metallurgical specimens to high temperatures in coil furnace  
[NASA-CASE-XLE-04026] c14 N71-23267  
Electric furnace for vacuum and zero gravity melting of high melting point materials during earth orbit  
[NASA-CASE-MFS-20710] c11 N72-23215  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c35 N76-24523  
Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c76 N81-30012

## FUSELAGES

Fuselage structure using advanced technology metal matrix fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c05 N78-18045

## FUSION (MELTING)

Silver chloride use in technique for fusion bonding of graphite to silver, glass, ceramics, and certain other metals  
[NASA-CASE-XGS-00963] c15 N69-39735  
Process for fiberizing ceramic materials with high fusion temperatures and tensile strength  
[NASA-CASE-XNP-00597] c18 N71-23088  
One step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c37 N80-11469

## FUSION WELDING

Fabricating solar cells with dielectric layers to improve glass fusion  
[NASA-CASE-XGS-04531] c03 N69-24267  
Control of fusion welding through use of thermocouple wire  
[NASA-CASE-MFS-06074] c15 N71-20393  
Electrical resistance butt welder for welding fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c15 N73-14468  
Diffusion welding in air --- solid state welding of butt joint by fusion welding, surface cleaning, and heating  
[NASA-CASE-LEW-11387-1] c37 N74-18128

## G

## GADOLINIUM

Doping silicon material with gadolinium to increase radiation resistance of solar cells  
[NASA-CASE-XLE-02792] c26 N71-10607  
Gadolinium or samarium doped-silicon semiconductor material with resistance to radiation damage for use in solar cells  
[NASA-CASE-XLE-10715] c26 N71-23292

## GALLIUM

Device for measuring two orthogonal components of force with gallium flotation of measuring target for use in vacuum environments  
[NASA-CASE-XAC-04885] c14 N71-23790

## GALLIUM ARSENIDES

Describing method for vapor deposition of gallium arsenide films to manganese substrates to provide semiconductor devices with low resistance substrates  
[NASA-CASE-XNP-01328] c26 N71-18064  
Gallium arsenide solar cell preparation by surface deposition of cuprous iodide on thin n-type polycrystalline layers and heating in iodine vapor  
[NASA-CASE-XNP-01960] c09 N71-23027  
Water content in vapor deposition atmosphere for forming n-type and p-type junctions of zinc doped gallium arsenide  
[NASA-CASE-XNP-01961] c26 N71-29156  
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c25 N75-26043  
Vapor deposition apparatus --- semiconductors and gallium arsenides  
[NASA-CASE-HQN-10462] c25 N75-29192

## GALVANIC SKIN RESPONSE

Adhesive spray process for attaching biomedical skin electrodes  
[NASA-CASE-XPR-07658-1] c05 N71-26293

## GAMMA RAY SPECTROMETERS

Low intensity X-ray and gamma-ray imaging spectrometer  
[NASA-CASE-GSC-12587-1] c35 N80-29635

## GAMMA RAYS

Design of gamma ray spectrometer for measurement of intense radiation using Compton scattering effect  
[NASA-CASE-MPS-21441-1] c14 N73-30392  
Low intensity X-ray and gamma-ray imaging device --- fiber optics  
[NASA-CASE-GSC-12263-1] c74 N79-20857  
Real-time 3D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c74 N82-10862

## GANTRY CRANES

Design and characteristics of mechanically extended and telescoping boom on crane assembly  
[NASA-CASE-NPO-11118] c03 N72-25021

## GAPS

Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NFO-10711-1] c35 N77-21392  
High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529

## GARMENTS

Electromedical garment, applying vectorcardiologic type electrodes to human torsos for data recording during physical activity  
[NASA-CASE-XPR-10856] c05 N71-11189  
Flexible joint for pressurizable garment  
[NASA-CASE-ASC-11072] c54 N74-32546  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c54 N78-31736  
Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c52 N81-28740

## GAS ANALYSIS

Gas analyzer for bi-gaseous mixtures suitable for use in test facilities  
[NASA-CASE-XLA-01131] c14 N71-10774  
Describing crystal oscillator instrument for detecting condensable gas contaminants in vacuum apparatus  
[NASA-CASE-NPO-10144] c14 N71-17701  
Design and characteristics of time of flight mass spectrometer to measure or analyze gases at low pressures and time of flight of single gas molecule  
[NASA-CASE-XNP-01056] c14 N71-23041  
Microwave double resonance spectroscopy absorption cell for gas analysis  
[NASA-CASE-LAR-10305] c14 N71-26137  
Ion microprobe mass spectrometer with cooled electrode target for analyzing traces of fluids  
[NASA-CASE-EBC-10014] c14 N71-28863  
Nondispersive gas analysis using radiation detection for quantitative analysis  
[NASA-CASE-ARC-10308-1] c06 N72-31141  
Apparatus for analyzing gas samples in containers including vacuum chamber, mass spectrometer, and gas chromatography  
[NASA-CASE-GSC-10903-1] c14 N73-12444  
Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c35 N74-26949

- Fast scan control for deflection type mass spectrometers  
[NASA-CASE-LAR-11428-1] c35 N74-34857
- NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-1C802-1] c35 N75-30502
- Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c45 N76-17656
- Nulling device for detection of trace gases by NDIR absorption  
[NASA-CASE-ARC-1C760-1] c25 N76-22323
- Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MSC-14428-1] c23 N77-17161
- Fluid sampling device  
[NASA-CASE-GSC-12143-1] c35 N77-32456
- Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c25 N81-14015
- Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c25 N81-25159
- GAS BAGS**  
Payload soft landing system using stowable gas bag  
[NASA-CASE-XLA-05881] c31 N71-16085
- GAS BEARINGS**  
Externally pressurized air bearing for gyros operating in high temperature, low gravity environments  
[NASA-CASE-XMF-00515] c15 N70-34664
- Slit regulated gas journal bearing  
[NASA-CASE-XNP-00476] c15 N70-38620
- Air bearings for spacecraft gyros  
[NASA-CASE-XMF-00339] c15 N70-39896
- Air bearings for near frictionless transfer of loads from one body to another  
[NASA-CASE-XMF-01887] c15 N71-10617
- Fluid power transmission and gas bearing system  
[NASA-CASE-XMS-01445] c12 N71-16631
- Bismuth and lead surface coatings for gas bearings in aerospace engineering  
[NASA-CASE-XGS-02011] c15 N71-20739
- Swivel support for gas bearing for position adjustment between ball and supporting cup  
[NASA-CASE-XMF-07808] c15 N71-23812
- Low friction gas bearing system for fluid power transmission to bearing-supported payload  
[NASA-CASE-ERC-10097] c15 N71-28465
- Gas bearing for model support with capacity for measuring angular displacement of model in bearing  
[NASA-CASE-XLA-09346] c15 N71-28740
- Journal air bearing with cylindrical cup designed to ride on shaft  
[NASA-CASE-MFS-20423] c15 N72-11388
- Air bearing for use in exterior environment for moving heavy loads  
[NASA-CASE-WMP-10002] c15 N72-17451
- Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c37 N76-18459
- Thrust bearing  
[NASA-CASE-LEW-11949-1] c37 N76-29588
- Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c37 N79-10418
- GAS CHROMATOGRAPHY**  
Micropacked column for rapid chromatographic analysis using low gas flow rates  
[NASA-CASE-XNP-04816] c06 N69-39536
- Automatic baseline stabilization for ionization detector used in gas chromatograph  
[NASA-CASE-XNP-03128] c10 N70-41991
- Gas chromatographic method for determining water in nitrogen tetroxide rocket propellant  
[NASA-CASE-NPO-10234] c06 N72-17094
- Gas chromatographic method for analyzing hydrogen deuterium mixtures  
[NASA-CASE-NPO-11322] c06 N72-25146
- Ultraviolet chromatographic detector for quantitative and qualitative analysis of compounds  
[NASA-CASE-HQN-10756-1] c14 N72-25428
- Apparatus for analyzing gas samples in containers including vacuum chamber, mass spectrometer, and gas chromatography  
[NASA-CASE-GSC-10903-1] c14 N73-12444
- Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c35 N75-26334
- Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c25 N80-23383
- GAS COMPOSITION**  
Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c25 N80-20334
- Mobile sampler for use in acquiring samples of terrestrial atmospheric gasses  
[NASA-CASE-NPO-15220-1] c35 N81-24414
- Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NEC-14544-1] c46 N82-12685
- GAS COOLED REACTORS**  
Gaseous core diffusion nuclear reactor for thermal energy generation  
[NASA-CASE-LEW-10250-1] c22 N71-28759
- GAS COOLING**  
Gas balancing, cryogenic refrigeration apparatus with Joule-Thomson valve assembly  
[NASA-CASE-NFO-10309] c15 N69-23190
- Gas cooled high temperature thermocouple  
[NASA-CASE-XLF-09475-1] c33 N71-15568
- Containerless melting and rapid solidification apparatus and method  
[NASA-CASE-MFS-25305-1] c35 N81-16427
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c76 N81-30012
- GAS DENSITY**  
Dynamic sensor for gas pressure or density measurement  
[NASA-CASE-XAC-02877] c14 N70-41681
- Device for simultaneously determining density, velocity, and temperature of streaming gas  
[NASA-CASE-XLA-03375] c16 N71-24074
- Coherent light beam device and method for measuring gas density in vacuum chambers  
[NASA-CASE-XER-11203] c14 N71-28994
- Absorbing gas reactivity control system for minimizing power distribution and perturbation in nuclear reactors  
[NASA-CASE-XLF-04599] c22 N72-20597
- Electrodeposition method for producing crystalline material from dense gaseous medium  
[NASA-CASE-NFO-10440] c15 N72-21466
- Wide range dynamic pressure sensor with vibrating diaphragm for measuring density and pressure of gaseous environment  
[NASA-CASE-ARC-10263-1] c14 N72-22438
- Absolute pressure measuring device for measuring gas density level in high vacuum range  
[NASA-CASE-LAR-10000] c14 N73-30394
- Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector --- for determining density of gas  
[NASA-CASE-ARC-10631-1] c74 N76-20958
- GAS DETECTORS**  
Method and transducer device for detecting presence of hydrogen gas  
[NASA-CASE-XMF-03873] c06 N69-39733
- Development of device for detecting hydrogen in ambient environments  
[NASA-CASE-MFS-11537] c14 N71-20442
- Gas leak detection in evacuated systems using ultraviolet radiation probe  
[NASA-CASE-ERC-10034] c15 N71-24896
- Fast response miniature carbon dioxide detector with no moving parts for measuring concentration in any atmosphere  
[NASA-CASE-MSC-13332-1] c14 N72-21408
- Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NFO-13231-1] c45 N75-27585
- Carbon monoxide monitor --- using real time operation  
[NASA-CASE-MFS-22060-1] c35 N75-29380
- Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector --- for determining density of gas  
[NASA-CASE-ARC-10631-1] c74 N76-20958
- Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NFO-13474-1] c45 N76-21742
- Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c35 N76-22509

Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c35 N77-21393

Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c35 N78-13400

Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c25 N81-14015

Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c25 N81-25159

**GAS DISCHARGE TUBES**  
Direct current powered self repeating plasma accelerator with interconnected annular and linear discharge channels  
[NASA-CASE-XLA-03103] c25 N71-21693

**GAS DISCHARGES**  
Radio frequency noise generator having microwave slow-wave structure in gas discharge plasma  
[NASA-CASE-XER-11019] c09 N71-23598

**GAS EVOLUTION**  
Development of filter system for control of outgas contamination in vacuum conditions using absorbent beds of molecular sieve zeolite, silica gel, and charcoal  
[NASA-CASE-MFS-14711] c15 N71-26185

**GAS EXPANSION**  
Sealed electric storage battery with gas manifold interconnecting each cell  
[NASA-CASE-XNP-03378] c03 N71-11051

Method and apparatus for producing very low temperature refrigeration based on gas pressure balance  
[NASA-CASE-XNP-08877] c15 N71-23025

Gas-operated actuator with cyclic motion of expansion chamber  
[NASA-CASE-NPO-11340] c15 N72-33477

**GAS FLOW**  
Tubular flow restrictor for gas flow control in pipeline  
[NASA-CASE-NPO-10117] c15 N71-15608

Developing high pressure gas purification and filtration system for use in test operations of space vehicles  
[NASA-CASE-MFS-12806] c14 N71-17588

Burst diaphragm flow initiator for installation in short duration wind tunnels  
[NASA-CASE-MFS-12915] c11 N71-17600

Color photointerpretation of interference colors reflected from thin film oil-coated components in moving gases for gas flow visualization  
[NASA-CASE-XMP-01779] c12 N71-20815

Transducer for monitoring oxygen flow in respirator  
[NASA-CASE-FRC-10012] c14 N72-17329

Design, development, and operation of shock tube with bypass piston tunnel  
[NASA-CASE-NPO-12109] c11 N72-22245

Continuous gas flow control by fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c28 N72-22769

Development of filter apparatus for gas separation and characteristics of filter cell support frame for improved operation  
[NASA-CASE-MSC-12297] c14 N72-23457

Pressurized inert gas feed for lighting system  
[NASA-CASE-KSC-10644] c09 N72-27227

Development of method for controlling vapor content of gas  
[NASA-CASE-NPO-10633] c03 N72-28025

Gas flow control device, including housing and input port  
[NASA-CASE-NPO-11479] c15 N73-13462

Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c35 N74-15127

Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c34 N74-27730

Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c77 N75-20139

Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c35 N75-30503

Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c35 N78-10428

Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c37 N78-17384

Directional flow sensor  
[NASA-CASE-FRC-11074-1] c35 N82-11436

**GAS GENERATORS**

Chlorine generator for purifying water in life support systems of manned spacecraft  
[NASA-CASE-XLA-08913] c14 N71-28933

Gas operated quick disconnect coupling for umbilical connectors  
[NASA-CASE-NPO-11202] c15 N72-25450

Actuator operated by electrolytic drive gas generator and evacuator  
[NASA-CASE-NFC-11369] c15 N73-13467

Development and operating principles of gas generator for deploying recovery parachutes from space capsules during atmospheric entry  
[NASA-CASE-LAR-10549-1] c31 N73-13898

Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c37 N76-16446

Hydrogen-rich gas generator  
[NASA-CASE-NPO-13464-1] c44 N76-18642

Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c44 N76-29700

Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c44 N76-29704

Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c44 N77-10636

A gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c37 N81-24445

**GAS GUNS**  
Electric arc device for minimizing electrode ablation and heating gases to supersonic or hypersonic wind tunnel temperatures  
[NASA-CASE-XAC-00319] c25 N70-41628

**GAS HEATING**  
Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c35 N74-15126

**GAS INJECTION**  
Pressurized gas injection for burning rate control of solid propellants  
[NASA-CASE-XLF-03494] c27 N71-21819

Compact hydrogenator  
[NASA-CASE-NFC-11682-1] c35 N74-15127

Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c35 N75-26334

In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c43 N78-14452

Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089

Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c45 N80-14579

Containerless melting and rapid solidification apparatus and method  
[NASA-CASE-MFS-25305-1] c35 N81-16427

**GAS IONIZATION**  
Electrostatic modulator for communicating through plasma sheath formed around spacecraft during reentry  
[NASA-CASE-XLA-01400] c07 N70-41331

Multichannel photoionization chamber for measuring absorption, photoionization yield, and coefficients of gases  
[NASA-CASE-EBC-10044-1] c14 N71-27090

Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c35 N76-18403

Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c36 N78-17366

Charge transfer reaction laser with preionization means  
[NASA-CASE-NPC-13945-1] c36 N78-27402

Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c72 N80-33186

**GAS LASERS**  
Gas laser frequency stabilized by position of mirrors in resonant cavity  
[NASA-CASE-XGS-03644] c16 N71-18614

Inert gas metallic vapor laser  
[NASA-CASE-NPC-13449-1] c36 N75-32441

Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c36 N76-18428

Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c36 N78-17366

Charge transfer reaction laser with preionization means  
[NASA-CASE-NPC-13945-1] c36 N78-27402

**GAS LUBRICANTS**  
High temperature gas lubricant consisting of two fluoro-bromo-methanes

- [NASA-CASE-XLE-00353] c18 N70-35897  
Thrust bearing  
[NASA-CASE-LEW-11949-1] c37 N76-29588  
Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c37 N79-10418
- GAS MASERS**  
Solid state chemical source for ammonia beam masers  
[NASA-CASE-XGS-01504] c16 N70-41578  
Atomic hydrogen maser with bulb temperature control by output frequency difference signal for wall shift elimination  
[NASA-CASE-HGN-10654-1] c16 N73-13489  
Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c36 N75-15029  
Atomic standard with variable storage volume  
[NASA-CASE-GSC-11895-1] c35 N76-15436
- GAS MIXTURES**  
Gas analyzer for bi-gaseous mixtures suitable for use in test facilities  
[NASA-CASE-XLA-01131] c14 N71-10774  
Equipment for measuring partial water vapor pressure in gas tank  
[NASA-CASE-XMS-01618] c14 N71-20741  
Separation cell with permeable membranes for fluid mixture component separation  
[NASA-CASE-XMS-02952] c18 N71-20742  
Gas chromatographic method for analyzing hydrogen deuterium mixtures  
[NASA-CASE-NPO-11322] c06 N72-25146  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c44 N76-29700  
Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c44 N77-10636  
Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c25 N79-28253
- GAS PIPES**  
Tubular flow restrictor for gas flow control in pipeline  
[NASA-CASE-NPO-10117] c15 N71-15608
- GAS PRESSURE**  
Expulsion and measuring device for determining quantity of liquid in tank under conditions of weightlessness  
[NASA-CASE-XMS-01546] c14 N70-40233  
Dynamic sensor for gas pressure or density measurement  
[NASA-CASE-XAC-02877] c14 N70-41681  
Wide range dynamic pressure sensor with vibrating diaphragm for measuring density and pressure of gaseous environment  
[NASA-CASE-ARC-10263-1] c14 N72-22438  
Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c35 N75-33368  
Depressurization of arc lamps  
[NASA-CASE-NFO-10790-1] c33 N77-21316  
Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c20 N80-18097
- GAS STREAMS**  
Device for simultaneously determining density, velocity, and temperature of streaming gas  
[NASA-CASE-XLA-03375] c16 N71-24074  
Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c35 N74-32878  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067  
Simultaneous treatment of SC2 containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c45 N79-12584  
Gas levitator and method for containerless processing  
[NASA-CASE-MFS-25509-1] c34 N82-10359
- GAS TEMPERATURE**  
Device for simultaneously determining density, velocity, and temperature of streaming gas  
[NASA-CASE-XLA-03375] c16 N71-24074
- GAS TRANSPORT**  
Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c31 N78-17238
- GAS TUBES**  
Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c37 N79-28550
- GAS TURBINE ENGINES**  
Variable-orifice hydraulic mechanism for aircraft gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c28 N73-19793  
Swirl can, full-annulus combustion chambers for high performance gas turbine engines  
[NASA-CASE-LEW-11326-1] c23 N73-30665  
Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c20 N76-14190  
Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c27 N76-16229  
Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c07 N77-14025  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c07 N77-23106  
Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c07 N77-27116  
Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c26 N77-32280  
Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c37 N77-32501  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c37 N78-10467  
Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c37 N78-17384  
Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c07 N78-18066  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067  
Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c37 N78-24545  
Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089  
Independent power generator  
[NASA-CASE-LAR-11208-1] c44 N78-32539  
Redundant disc  
[NASA-CASE-LEW-12496-1] c07 N78-33101  
Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c07 N79-14096  
Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c07 N79-14097  
A silicon-slurry/aluminide coating --- protects aircraft and land-based gas turbine engines  
[NASA-CASE-LEW-13343-1] c24 N80-26389  
Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c37 N81-14318  
Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c07 N81-14999  
Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c07 N81-19115
- GAS TURBINES**  
Method for maintaining good performance in gas turbine during air flow distortion  
[NASA-CASE-LEW-10286-1] c28 N71-28915  
Gas turbine exhaust nozzle --- for noise reduction  
[NASA-CASE-LEW-11569-1] c07 N74-15453  
Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c07 N78-17056  
Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c07 N78-25090  
Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c34 N78-27357  
Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c07 N79-10057  
Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPC-14130-1] c34 N79-20335  
Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c26 N81-25188
- GAS VALVES**  
High-temperature, high-pressure spherical segment valve  
[NASA-CASE-XAC-00074] c15 N70-34817  
Shrink-fit vacuum system gas valve  
[NASA-CASE-XGS-00587] c15 N70-35087  
Gas valve operated by thermally expanding and contracting device  
[NASA-CASE-XLE-00815] c15 N70-35407  
Three-port transfer valve with one port open continuously suitable for manned space flight

- [NASA-CASE-XAC-01158] c15 N71-23051
- GAS WELDING**
- Emission spectroscopy method for contamination monitoring of inert gas metal arc welding [NASA-CASE-XMF-02039] c15 N71-15871
- Grain refinement control in TIG arc welding [NASA-CASE-MSC-19095-1] c37 N75-19683
- GAS-LIQUID INTERACTIONS**
- Fluid control apparatus and method [NASA-CASE-LAR-11110-1] c34 N75-26282
- GAS-METAL INTERACTIONS**
- Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides [NASA-CASE-LEW-23169-2] c26 N81-16209
- GASDYNAMIC LASERS**
- Diatomic infrared gasdynamic laser --- for producing different wavelengths [NASA-CASE-ARC-10370-1] c36 N75-31426
- GASEOUS DIFFUSION**
- Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove [NASA-CASE-XLE-02531] c05 N71-23080
- Gaseous core diffusion nuclear reactor for thermal energy generation [NASA-CASE-LEW-10250-1] c22 N71-26759
- Gas diffusion liquid storage bag and method of use for storing blood [NASA-CASE-NPO-13930-1] c52 N79-14749
- GASEOUS FISSION REACTORS**
- Gaseous core diffusion nuclear reactor for thermal energy generation [NASA-CASE-LEW-10250-1] c22 N71-26759
- GASEOUS ROCKET PROPELLANTS**
- Electrostatic ion engines using high velocity electrons to ionize propellant [NASA-CASE-XLE-00376] c28 N70-37245
- Detonation reaction engine comprising outer housing enclosing pair of inner walls for continuous flow [NASA-CASE-XMF-06926] c28 N71-22983
- GASES**
- Apparatus and process for volumetrically dispensing reagent quantities of volatile chemicals for small batch reactions [NASA-CASE-NFO-10070] c15 N71-27372
- Observation window for internal gas confining chamber [NASA-CASE-NPO-10890] c11 N73-12265
- Device for detection of combustion light preceding gaseous explosions [NASA-CASE-LAR-10739-1] c14 N73-16484
- Low gravity phase separator [NASA-CASE-MSC-14773-1] c35 N78-12390
- Water separator [NASA-CASE-XMS-01295-1] c37 N79-21345
- GASKETS**
- Leakproof soft metal seal for use in very high vacuum systems operating at cryogenic temperatures [NASA-CASE-XGS-02441] c15 N70-41629
- Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures [NASA-CASE-MFS-21364-1] c37 N74-18126
- GATES (CIRCUITS)**
- Flux gate magnetometer with toroidal gating coil and solenoidal output coil for signal modulation or amplification [NASA-CASE-XGS-01881] c09 N70-40123
- Silicon controlled rectifier pulse gate amplifier for blocking false gating caused by negative transient voltages [NASA-CASE-XLA-07497] c09 N71-12514
- Logic AND gate for fluid circuits [NASA-CASE-XLA-07391] c12 N71-17579
- Synchronous counter design incorporating cascaded binary stages driven by previous stages and inputs through NAND gates [NASA-CASE-XGS-02440] c08 N71-19432
- Switching series regulator with gating control network [NASA-CASE-XMS-09352] c09 N71-23316
- Memory device for two-dimensional radiant energy array computers [NASA-CASE-GSC-11839-2] c60 N78-10709
- Transformer regulated self-stabilizing chopper [NASA-CASE-XGS-09186] c33 N78-17295
- Pulsed phase locked loop strain monitor [NASA-CASE-LAR-12772-1] c33 N81-15195
- Controller for computer control of brushless dc motors --- automobile engines [NASA-CASE-NFO-13970-1] c33 N81-20352
- Combinational logic for generating gate drive signals for phase control rectifiers [NASA-CASE-MFS-25208-1] c33 N81-27402
- GATES (OPENINGS)**
- Longitudinal film gate and lock mechanism for securing film in motion picture cameras under vibration and high acceleration loads [NASA-CASE-LAR-10686] c14 N71-28935
- GAW-1 AIRFOIL**
- Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil [NASA-CASE-LAR-10585-1] c02 N76-22154
- GEAR TEETH**
- Wobble gear drive mechanism --- for aerospace environments [NASA-CASE-WOO-00625] c37 N78-17385
- Belt for transmitting power from a cogged driving member to a cogged driven member [NASA-CASE-GSC-12289-1] c37 N80-32717
- GEARS**
- Precision stepping drive device using cam disk [NASA-CASE-MFS-14772] c15 N71-17692
- Gearing system for eliminating backlash and filtering input torque fluctuations from high inertia load [NASA-CASE-XGS-04227] c15 N71-21744
- Self lubricating gears and other mechanical parts having surface adapted to frictional contact [NASA-CASE-MFS-14971] c15 N71-24984
- Concentric differential gearing arrangement [NASA-CASE-ARC-10462-1] c37 N74-27901
- Sequencing device utilizing planetary gear set [NASA-CASE-MSC-19514-1] c37 N79-20377
- Power control for hot gas engines [NASA-CASE-NFO-14220-1] c37 N81-14318
- GELLED ROCKET PROPELLANTS**
- Method and apparatus for producing fine particles in cryogenic liquid bath for gelled rocket propellants [NASA-CASE-NFO-10250] c23 N71-16212
- GELS**
- Intermittent type silica gel adsorption refrigerator for providing temperature control for spacecraft components [NASA-CASE-XNF-00920] c15 N71-15906
- GENERAL AVIATION AIRCRAFT**
- Explosively activated egress area [NASA-CASE-LAR-12624-1] c03 N81-29107
- GENERATORS**
- Apparatus for establishing flow of a fluid mass having a known velocity [NASA-CASE-MFS-21424-1] c34 N74-27730
- GEODESY**
- Navigation system and method [NASA-CASE-GSC-12508-1] c04 N81-26085
- GEODETIC SURVEYS**
- Geodetic distance measuring apparatus [NASA-CASE-GSC-12609-1] c36 N81-22344
- GEODIMETERS**
- Geodetic distance measuring apparatus [NASA-CASE-GSC-12609-1] c36 N81-22344
- GEOLOGICAL SURVEYS**
- Borehole geological assessment [NASA-CASE-NPC-14231-1] c46 N80-10709
- Geological assessment probe [NASA-CASE-NFO-14558-1] c46 N80-24906
- GEOMETRY**
- Rhomboid prism pair for rotating the plane of parallel light beams --- laser velocimeters [NASA-CASE-ARC-11311-1] c74 N81-16882
- GERMANIUM**
- Germanium coated microbridge and method [NASA-CASE-MFS-23274-1] c33 N78-13320
- GIMBALS**
- Gimbaled partially submerged nozzle for solid propellant rocket engines for providing directional control [NASA-CASE-XMF-01544] c28 N70-34162
- Inertial gimbal alignment system for spacecraft guidance [NASA-CASE-XAF-01669] c21 N71-23289

- Three stage motion restraining mechanism for restraining and damping three dimensional vibrational movement of gimballed package during launch of spacecraft  
[NASA-CASE-GSC-10306-1] c15 N71-24694
- Hermetically sealed vibration damper design for use in gimbal assembly of spacecraft inertial guidance system  
[NASA-CASE-MSC-10959] c15 N71-26243
- Low friction bearing and lock mechanism for two-axis gimbal carrying satellite payload  
[NASA-CASE-GSC-10556-1] c31 N71-26537
- Failure detection and control means for improved drift performance of a gimballed platform system  
[NASA-CASE-MFS-23551-1] c04 N76-26175
- Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c04 N81-21047
- Aircraft body-axis rotation measurement system  
[NASA-CASE-PRC-11043-1] c06 N81-22048
- GIRDERS**  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c31 N81-12283
- GLANDS (SEALS)**  
Development of mating flat surfaces to inhibit leakage of fluid around shafts  
[NASA-CASE-XLE-10326-2] c15 N72-29488
- Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c37 N81-26447
- GLASS**  
Fabricating solar cells with dielectric layers to improve glass fusion  
[NASA-CASE-XGS-04531] c03 N69-24267
- Reduced gravity liquid configuration simulator to study propellant behavior in rocket fuel tanks  
[NASA-CASE-XLE-02624] c12 N69-39988
- Metal pattern bonding technique for cover glass attachment to silicon solar cells for space applications  
[NASA-CASE-XLE-08569] c03 N71-23449
- Apparatus for applying thin glass slides to solar cells  
[NASA-CASE-NPO-10575] c03 N72-25019
- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c37 N74-21063
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c44 N76-14600
- Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c74 N77-10899
- Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c37 N77-23482
- Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c27 N78-32260
- Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c37 N80-29705
- Method of forming frozen spheres in a force-free drop tower --- microballoons for inertial confinement fusion  
[NASA-CASE-NPO-14845-1] c31 N81-16328
- GLASS COATINGS**  
Method of attaching cover glass to silicon solar cell without using adhesive  
[NASA-CASE-XLE-08569-2] c03 N71-24681
- Helium outgassing process for fused glass coating on ion accelerator grid  
[NASA-CASE-LEW-10278-1] c15 N71-28582
- Development of process for constructing protective covers for solar cells  
[NASA-CASE-GSC-11514-1] c03 N72-24037
- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c74 N78-15879
- High temperature glass thermal control structure and coating  
[NASA-CASE-ARC-11164-1] c27 N82-10228
- GLASS ELECTRODES**  
Liquid junction for glass electrode or pH meters  
[NASA-CASE-NPO-10682] c15 N70-34699
- Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c52 N79-27836
- GLASS FIBER REINFORCED PLASTICS**  
Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c24 N79-16915
- Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c24 N81-29163
- GLASS FIBERS**  
Nonmagnetic hermetically sealed battery case made of epoxy resin and woven glass tape for use with electrochemical cells in spacecraft  
[NASA-CASE-XGS-00886] c03 N71-11053
- Lathe tool and holder combination for machining resin impregnated fiberglass cloth laminates  
[NASA-CASE-XLA-10470] c15 N72-21489
- Development and characteristics of polyimide impregnated laminates with fiberglass cloth backing for application as printed circuit boards  
[NASA-CASE-MFS-20408] c18 N73-12604
- Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c24 N74-30001
- Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c27 N76-15310
- Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c37 N76-24575
- Fiberglass/epoxy composite automotive door structure including a glass-reinforced intrusion strip  
[NASA-CASE-NPO-15057-1] c24 N81-19230
- GLAUCOMA**  
Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c52 N80-14684
- GLIDE PATHS**  
Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c05 N75-12930
- GLOBES**  
Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c19 N74-21015
- GLOVES**  
Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove  
[NASA-CASE-XLE-02531] c05 N71-23080
- Restraining mechanism  
[NASA-CASE-MSC-13054] c54 N78-17677
- GLOW DISCHARGES**  
Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c27 N74-13270
- Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c27 N78-31233
- Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c33 N79-15245
- GLUCOSE**  
Use of enzyme hexokinase and glucose to reduce inherent light levels of ATP in luciferase compositions  
[NASA-CASE-XGS-05533] c04 N69-27487
- GOLD COATINGS**  
Lithium drifted silicon radiation detector with gold rectifying contacts  
[NASA-CASE-XLE-10529] c14 N69-23191
- GONDOLAS**  
System for controlling torque buildup in suspension of gondola connected to balloon by parachute shroud lines  
[NASA-CASE-GSC-11077-1] c02 N73-13008
- GRANULAR MATERIALS**  
Development of device for separating, collecting, and viewing soil particles  
[NASA-CASE-XNF-09770] c15 N71-20440
- GRAPHITE**  
Silver chloride use in technique for fusion bonding of graphite to silver, glass, ceramics, and certain other metals  
[NASA-CASE-XGS-00963] c15 N69-39735
- Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c24 N75-28135
- Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c27 N78-17215
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c28 N81-14103



- Ion sputter textured graphite --- applications  
to electron tube devices  
[NASA-CASE-LEW-12919-1] c24 N81-27198
- GRAPHITE-EPOXY COMPOSITES**  
Partial interlaminar separation system for  
composites  
[NASA-CASE-LAR-12065-1] c24 N81-14000
- GRATINGS (SPECTRA)**  
Concave grating spectrometer for use in near and  
vacuum ultraviolet regions  
[NASA-CASE-XGS-01036] c14 N70-40003  
Diffraction grating configuration for X-ray and  
ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c74 N80-21140
- GRAVIMETERS**  
Device for determining acceleration of gravity  
by interferometric measurement of travel of  
falling body  
[NASA-CASE-XMF-05844] c14 N71-17587
- GRAVITATION**  
Design of precision vertical alignment system  
using laser with gravitationally sensitive  
cavity  
[NASA-CASE-ARC-10444-1] c16 N73-33397  
Anti-gravity device  
[NASA-CASE-MFS-22758-1] c70 N75-26789
- GRAVITATIONAL CONSTANT**  
Gravity device for accurate and rapid indication  
of relative gravity conditions aboard  
accelerating carrier  
[NASA-CASE-XMF-00424] c11 N70-38196
- GRAVITATIONAL EFFECTS**  
Gravity environment simulation by locomotion and  
restraint aid for studying manual operation  
performance of astronauts at zero gravity  
[NASA-CASE-ARC-10153] c05 N71-28619  
Rotary plant growth accelerating apparatus ---  
weightlessness  
[NASA-CASE-ARC-10722-1] c51 N75-25503
- GRAVITATIONAL FIELDS**  
Difference indicating circuit used in  
conjunction with device measuring  
gravitational fields  
[NASA-CASE-XNP-08274] c10 N71-13537  
Process for preparation of large-particle-size  
monodisperse latexes  
[NASA-CASE-MFS-25000-1] c25 N81-19242
- GRAVITY GRADIENT SATELLITES**  
Stabilization system for gravity-oriented  
satellites using single damper rod  
[NASA-CASE-XAC-01591] c31 N71-17729  
Method of stationkeeping for lenticular gravity  
gradient satellites  
[NASA-CASE-XLA-03132] c31 N71-22969
- GRAVITY GRADIOMETERS**  
Gravity device for accurate and rapid indication  
of relative gravity conditions aboard  
accelerating carrier  
[NASA-CASE-XMF-00424] c11 N70-38196  
Gravity gradient attitude control system with  
gravity gradiometer and reaction wheels for  
artificial satellite attitude control  
[NASA-CASE-GSC-10555-1] c21 N71-27324
- GRAZING INCIDENCE**  
Diffraction grating configuration for X-ray and  
ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c74 N80-21140
- GRIDS**  
Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c20 N75-18310  
Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c37 N76-14461  
Method of constructing dished ion thruster grids  
to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c20 N76-21276  
Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c44 N76-31666
- GRINDING (MATERIAL REMOVAL)**  
Laser device for removing material from rotating  
object for dynamic balancing  
[NASA-CASE-MFS-11279] c16 N71-20400  
Grinding mixtures of powdered metals and inert  
fillers for conversion to halide  
[NASA-CASE-LEW-10450-1] c15 N72-25448  
Method of forming a sharp edge on an optical  
device  
[NASA-CASE-GSC-12348-1] c74 N80-24149
- GRINDING MACHINES**  
Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c37 N74-27905
- GROOVES**  
Nonreusable energy absorbing device comprising  
ring member with plurality of recesses,  
cutting members, and guide member mounted in  
each recess  
[NASA-CASE-XMF-10040] c15 N71-22877  
Spiral groove seal --- for hydraulic rotating  
shaft  
[NASA-CASE-LEW-10326-3] c37 N74-10474  
Spiral groove seal --- for rotating shaft  
[NASA-CASE-XLE-10326-4] c37 N74-15125
- GROUND EFFECT MACHINES**  
Hovering type flying vehicle design and  
principle mechanisms for manned or unmanned use  
[NASA-CASE-MSC-12111-1] c02 N71-11039  
Platform with several ground effect pads and  
plenum chambers  
[NASA-CASE-MFS-14685] c31 N71-15689  
Open tube guideway for high speed air cushioned  
vehicles  
[NASA-CASE-LAR-10256-1] c85 N74-34672
- GROUND HANDLING**  
Supporting and protecting frame structure and  
plug for empty thrust chamber assembly,  
handling, and shipping  
[NASA-CASE-XMF-00580] c11 N70-35383
- GROUND STATIONS**  
Traffic control system for supersonic transports  
using synchronous satellite for data relay  
between vehicles and ground station  
[NASA-CASE-GSC-10087-1] c02 N71-19287  
Spacecraft transponder and ground station radar  
system for mapping planetary surfaces  
[NASA-CASE-NFO-11001] c07 N72-21118  
Ultra stable frequency distribution system  
[NASA-CASE-NFO-13836-1] c32 N78-15323
- GROUND SUPPORT EQUIPMENT**  
Equipment for testing of ground station ranging  
equipment and spacecraft transponders  
[NASA-CASE-XMS-05454-1] c07 N71-12391  
Controlled release device for use in launching  
rockets or missiles  
[NASA-CASE-XKS-03338] c15 N71-24043  
Apparatus for measuring an aircraft's speed and  
height  
[NASA-CASE-LAR-12275-1] c35 N79-18296
- GROUND-AIR-GROUND COMMUNICATION**  
Fabry-Perot interferometer retrodirective  
reflector modulator for optical communication  
[NASA-CASE-XGS-04480] c16 N69-27491  
Closed loop radio communication ranging system  
to determine distance between moving airborne  
vehicle and fixed ground station  
[NASA-CASE-XNP-01501] c21 N70-41930  
Location identification system with ground based  
transmitter and aircraft borne receiver/decoder  
[NASA-CASE-ERC-10324] c07 N72-25173  
Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c32 N80-20448
- GROUT**  
Antenna grout replacement system  
[NASA-CASE-NFO-15205-1] c37 N81-19457
- GUARDS (SHIELDS)**  
Safety shield for vacuum/pressure chamber  
viewing port  
[NASA-CASE-GSC-12513-1] c31 N81-19343
- GUIDANCE (MOTION)**  
Hovering type flying vehicle design and  
principle mechanisms for manned or unmanned use  
[NASA-CASE-MSC-12111-1] c02 N71-11039  
Development of adjustable attitude guide block  
for setting pins perpendicular to irregular  
convex work surface  
[NASA-CASE-XLA-07911] c15 N71-15571  
Longitudinal film gate and lock mechanism for  
securing film in motion picture cameras under  
vibration and high acceleration loads  
[NASA-CASE-LAR-10686] c14 N71-28935  
Combination guide and rotary bearing for freely  
moving shaft  
[NASA-CASE-XLA-00013] c15 N71-29136  
Guide member for stabilizing cable of open shaft  
elevator  
[NASA-CASE-KSC-10513] c15 N72-25453  
Phase sensitive guidance sensor for  
wire-following vehicles  
[NASA-CASE-NPO-15341-1] c33 N82-12346

## GUIDANCE SENSORS

Light sensitive digital aspect sensor for attitude control of earth satellites or space probes  
[NASA-CASE-XGS-00359] c14 N70-34158

Guidance analyzer having suspended spacecraft simulating sphere for astronavigation  
[NASA-CASE-XNP-09572] c14 N71-15621

Optical gauging system for monitoring machine tool alignment  
[NASA-CASE-XAC-09489-1] c15 N71-26673

Development of light sensing system for controlled orientation of object relative to sun or other light source  
[NASA-CASE-NPO-11311] c14 N72-25414

Sun direction detection system  
[NASA-CASE-NPO-13722-1] c74 N77-22951

Terminal guidance sensor system  
[NASA-CASE-NPO-14521-1] c54 N79-20746

Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c06 N81-22048

Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c74 N81-22894

Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c33 N82-12346

## GUN LAUNCHERS

Self-obturator gas-operated launcher for launching projectiles in decontaminated medium  
[NASA-CASE-NPO-11013] c11 N72-22247

## GUN PROPELLANTS

Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c28 N78-31255

Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c09 N79-21084

## GUNN EFFECT

Voltage tunable Gunn effect semiconductor for microwave generation  
[NASA-CASE-XER-07894] c09 N71-18721

Gunn effect microwave diodes with RF shielding  
[NASA-CASE-ERC-10119] c26 N72-21701

Multiterminal Gunn-type semiconductor microwave generator for producing stable signals  
[NASA-CASE-XER-07895] c26 N72-25679

Microwave generator using Gunn effect for magnetic tuning  
[NASA-CASE-NPO-12106] c09 N73-15235

## GUNS

Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c37 N76-18454

## GYRATORS

Design of gyrator circuit using operational amplifiers to replace ungrounded inductors  
[NASA-CASE-XAC-10608-1] c09 N71-12517

Gyrator circuit using MOS field effect transistors  
[NASA-CASE-MFS-21433] c09 N73-20232

Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c33 N74-34638

Integrable power gyrator --- with Z-matrix design using parallel transistors  
[NASA-CASE-MFS-22342-1] c33 N75-30428

## GYROSCOPES

Externally pressurized air bearing for gyros operating in high temperature, low gravity environments  
[NASA-CASE-XMP-00515] c15 N70-34664

Air bearings for spacecraft gyros  
[NASA-CASE-XMP-00339] c15 N70-39896

Development of spacecraft experiment pointing and attitude control system  
[NASA-CASE-XLA-05464] c21 N71-14132

Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NPO-13044-1] c35 N74-15094

All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c35 N77-20399

## GYROSCOPIC PENDULUMS

Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c04 N81-21047

## GYROSTABILIZERS

Passive dual spin misalignment compensators --- gyro stabilized device  
[NASA-CASE-GSC-11479-1] c35 N74-28097

Annular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c15 N76-14158

Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c06 N81-22048

## H

## HAFNIUM

Thermal shock resistant hafnia ceramic materials  
[NASA-CASE-LAR-10894-1] c18 N73-14584

## HALIDES

Grinding mixtures of powdered metals and inert fillers for conversion to halide  
[NASA-CASE-LEW-10450-1] c15 N72-25448

Zinc-halide battery with molten electrolyte  
[NASA-CASE-NFO-11961-1] c44 N76-18643

## HALL EFFECT

Current measurement by use of Hall effect generator  
[NASA-CASE-XAC-01662] c14 N71-23037

Brushless dc tachometer design with Hall effect crystals and output voltage magnitude proportional to rotor speed  
[NASA-CASE-MFS-20385] c09 N71-24904

Development of Hall effect transducer for converting mechanical shaft rotations into proportional electrical signals  
[NASA-CASE-LAR-10620-1] c09 N72-25255

Speed control system for dc motor equipped with brushless Hall effect device  
[NASA-CASE-MFS-20207-1] c09 N73-32107

Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c35 N75-13213

Magnetic field control --- electromechanical torquing devices  
[NASA-CASE-MFS-23828-1] c33 N80-17359

## HALL GENERATORS

Current measurement by use of Hall effect generator  
[NASA-CASE-XAC-01662] c14 N71-23037

## HALOGENS

Modification of polyurethanes with alkyl halide resins, inorganic salts, and encapsulated volatile and reactive halogen for fuel fire control  
[NASA-CASE-ARC-10098-1] c06 N71-24739

## HAMMERS

Exponential horn, copper plate, magnetic hammer, and anvil in apparatus for making diamonds  
[NASA-CASE-MFS-20698] c15 N72-20446

## HAND (ANATOMY)

Mechanically operated hand which can depress trigger using touch control device  
[NASA-CASE-MFS-20413] c15 N72-21463

Therapeutic hand exerciser  
[NASA-CASE-LAR-11667-1] c52 N76-19785

Compact artificial hand  
[NASA-CASE-NFO-13906-1] c54 N79-24652

## HANDLING EQUIPMENT

Supporting and protecting frame structure and plug for empty thrust chamber assembly, handling, and shipping  
[NASA-CASE-XMF-00580] c11 N70-35383

Handling tool for printed circuit cards  
[NASA-CASE-MFS-20453] c15 N71-29133

## HARDENING (MATERIALS)

Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c26 N75-29236

## HARMONIC GENERATORS

Wideband generator for producing sine wave quadrature and second harmonic of input signal  
[NASA-CASE-NPO-11133] c10 N72-20223

## HARNESSES

Helmet and torso tiedown mechanism for shortening pressure suits upon inflation  
[NASA-CASE-XMS-00784] c05 N71-12335

One hand backpack harness  
[NASA-CASE-LAR-10102-1] c05 N72-23085

Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c05 N75-25915

## HATCHES

Design and specifications of emergency escape system for spacecraft structures  
[NASA-CASE-MSC-12086-1] c05 N71-12345

## HEART FUNCTION

Development of instantaneous reading tachometer for measuring electrocardiogram signal rate  
[NASA-CASE-MFS-20418] c14 N73-24473

Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c52 N74-20726

**HEAT RATE**  
Digital cardiometer incorporating circuit for measuring heart rate of subject over predetermined portion of one minute also converting rate to beats per minute  
[NASA-CASE-XMS-02399] c05 N71-22896  
Development of instantaneous reading tachometer for measuring electrocardiogram signal rate  
[NASA-CASE-MFS-20418] c14 N73-24473  
Digital computing cardiometer  
[NASA-CASE-MFS-20284-1] c52 N74-12778  
Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c52 N80-23969

**HEAT**  
Thermionic converter for converting heat energy directly into electrical energy  
[NASA-CASE-XLE-01903] c22 N71-23599

**HEAT EXCHANGERS**  
Electrothermal rocket engine using resistance heated heat exchanger  
[NASA-CASE-XLE-00267] c28 N70-33356  
Space suit body heat exchanger design composed of thermal conductance yarn and liquid coolant loops  
[NASA-CASE-XMS-09571] c05 N71-19439  
Dual solid cryogenics for spacecraft refrigeration insuring low temperature cooling for extended periods  
[NASA-CASE-GSC-10188-1] c23 N71-24725  
Shell-side liquid metal boiler employing tube and shell heat exchanger  
[NASA-CASE-NFO-10831] c33 N72-20915  
Heat exchanger and decontamination system for multistage refrigeration unit  
[NASA-CASE-NFO-10634] c23 N72-25619  
Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c77 N75-20139  
Heat exchanger system and method  
[NASA-CASE-LAR-10799-2] c34 N76-17317  
Heat transfer device  
[NASA-CASE-MFS-22933-1] c34 N76-18374  
Heat exchanger  
[NASA-CASE-MFS-22991-1] c34 N77-10463  
Flat-plate heat pipe  
[NASA-CASE-GSC-11998-1] c34 N77-32413  
Combustor --- low nitrogen oxide formation  
[NASA-CASE-NFO-13958-1] c25 N79-11151  
Fuel delivery system including heat exchanger means  
[NASA-CASE-LEW-12793-1] c37 N79-11403  
Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c34 N79-13288  
Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c34 N79-13289  
Thermal energy transformer  
[NASA-CASE-NFO-14058-1] c44 N79-18443  
Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MSC-16182-1] c54 N80-10799  
Potential heat exchange fluids for use in sulfuric acid vaporizers  
[NASA-CASE-NFO-15015-1] c25 N80-23394  
Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c34 N80-24573  
A cycling Joule Thomson refrigerator  
[NASA-CASE-NFO-15251-1] c31 N81-19344  
Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c44 N81-24519

**HEAT FLUX**  
Heat flux sensor assembly with proviso for heat shield to reduce radiative transfer between sensor elements  
[NASA-CASE-XMS-05909-1] c14 N69-27459  
Heat flux sensor adapted for mounting on aircraft or spacecraft to measure aerodynamic heat flux inflow to aircraft skin  
[NASA-CASE-IFR-03802] c33 N71-23085  
Radial heat flux transformer for use in heating and cooling processes  
[NASA-CASE-NFO-10828] c33 N72-17948

**HEAT MEASUREMENT**

Electromagnetic energy detection by thermal sensor with vibrating electrode  
[NASA-CASE-XAC-10768] c09 N71-18830  
Specific wavelength colorimeter --- for measuring given solute concentration in test sample  
[NASA-CASE-MSC-14081-1] c35 N74-27860

**HEAT PIPES**

Electric power system utilizing thermionic plasma diodes in parallel and heat pipes as cathodes  
[NASA-CASE-XMF-05843] c03 N71-11055  
Microwave power receiving antenna solving heat dissipation problems by construction of elements as heat pipe devices  
[NASA-CASE-MFS-20333] c09 N71-13486  
Double-wall isothermal cylinder containing heat transfer fluid thermal reservoir as spacecraft insulation cover  
[NASA-CASE-MFS-20355] c33 N71-25353  
Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c34 N75-12222  
Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c34 N76-27515  
Production of I-123  
[NASA-CASE-LEW-11390-3] c25 N76-29379  
Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c34 N78-17336  
Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c34 N78-17337  
Thermal control canister  
[NASA-CASE-GSC-12253-1] c34 N79-31523  
Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c25 N81-19245  
Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c34 N81-22310  
Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c44 N81-24525  
High thermal power density heat transfer --- thermionic converters  
[NASA-CASE-LEW-12950-1] c34 N82-11399

**HEAT PUMPS**

Thermal pump-compressor for converting solar energy  
[NASA-CASE-XLA-00377] c33 N71-17610  
Manually activated heat pump for mechanically converting human operator output into heat energy  
[NASA-CASE-NPO-10677] c05 N72-11084  
Design and development of thermomechanical pump for transmitting warming fluid through fluid circuit to control temperature of spacecraft instrumentation  
[NASA-CASE-NFO-11417] c15 N73-24513  
Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c34 N78-17335  
Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c05 N81-26114

**HEAT RADIATORS**

Capillary radiator for carrying heat transfer liquid in planetary spacecraft structures  
[NASA-CASE-XLE-03307] c33 N71-14035  
Hydraulic actuator design for space deployment of heat radiators  
[NASA-CASE-MSC-11817-1] c15 N71-26611  
Development of method and equipment for testing heat radiative properties of material under controlled environmental conditions  
[NASA-CASE-MFS-20096] c14 N71-30026

**HEAT RESISTANT ALLOYS**

Preparation of nickel alloys for jet turbine blades operating at high temperatures  
[NASA-CASE-XLE-00151] c17 N70-33283  
Nickel alloy series for aerospace structures subjected to high temperatures  
[NASA-CASE-XLE-00283] c17 N70-36616  
High temperature cobalt-base alloy resistant to corrosion by liquid metals and to sublimation in vacuum environment  
[NASA-CASE-XLE-02991] c17 N71-16025  
Brazing alloy adapted for brazing corrosion resistant steel to refractory metals, also for brazing refractory metals to other refractory metals  
[NASA-CASE-XNE-03063] c17 N71-23365  
Superalloys from prealloyed powders at high temperatures

[NASA-CASE-LEW-10805-1] c15 N73-13465  
Method of making pressure tight seal for super alloy

[NASA-CASE-LAR-10170-1] c37 N74-11301  
Method of forming articles of manufacture from superalloy powders

[NASA-CASE-LEW-10805-2] c37 N74-13179  
Refractory porcelain enamel passive control coating for high temperature alloys

[NASA-CASE-MFS-22324-1] c27 N75-27160  
Cermets composition and method of fabrication --- heat resistant alloys and powders

[NASA-CASE-NPO-11120-1] c27 N76-15311  
Metallic hot wire anemometer --- for high speed wind tunnel tests

[NASA-CASE-ARC-10911-1] c35 N77-20400  
Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals

[NASA-CASE-MFS-22926-1] c24 N77-27187  
Directionally solidified eutectic gamma plus beta nickel-base superalloys

[NASA-CASE-LEW-12906-1] c26 N77-32279  
Nickel base alloy --- for gas turbine engine stator vanes

[NASA-CASE-LEW-12270-1] c26 N77-32280  
Directionally solidified eutectic gamma-gamma nickel-base superalloys

[NASA-CASE-LEW-12905-1] c26 N78-18183  
Heat pipes containing alkali metal working fluid

[NASA-CASE-LEW-12253-1] c34 N81-22310

**HEAT SHIELDING**

Heat flux sensor assembly with proviso for heat shield to reduce radiative transfer between sensor elements

[NASA-CASE-XMS-05909-1] c14 N69-27459  
Oven for heat treating heat shields

[NASA-CASE-XMS-04318] c15 N69-27671  
Compact heat shielding for interplanetary space vehicles

[NASA-CASE-XMS-00486] c33 N70-33344  
Sandwich panel structure for removing heat from shield between hot and cold areas

[NASA-CASE-XLA-00349] c33 N70-37979  
Aerodynamic configuration of reentry vehicle heat shield to provide longitudinal and directional stability at hypersonic velocities

[NASA-CASE-XMS-04142] c31 N70-41631  
Transpirationally cooled heat ablation system for interplanetary spacecraft reentry shielding

[NASA-CASE-XMS-02677] c31 N70-42075  
Synthesis of azine polymers for heat shields by azine-aromatic aldehyde reaction

[NASA-CASE-XMF-08656] c06 N71-11242  
Synthesis of schiff bases for heat shields by acetal amine reactions

[NASA-CASE-XMF-08652] c06 N71-11243  
Preparation and characteristics of lightweight refractory insulation

[NASA-CASE-XMF-05279] c18 N71-16124  
Development and characteristics of thermal radiation shielding of refractory metal foil used for induction furnace

[NASA-CASE-XLE-03432] c33 N71-24145  
Design and development of spacecraft with outer shell structure heat shielding and built-in, removable excursion module

[NASA-CASE-MSC-13047-1] c31 N71-25434  
Structure of fabric layers for micrometeoroid protection garment with capability for eliminating heat shorts for use in manufacturing space suits

[NASA-CASE-MSC-12109] c18 N71-26285  
Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles

[NASA-CASE-MSC-12619-2] c27 N79-12221  
Thermal insulation protection means

[NASA-CASE-MSC-12737-1] c24 N79-25142  
Installing fiber insulation

[NASA-CASE-MSC-16973-1] c37 N81-14317  
Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures

[NASA-CASE-MSC-18134-1] c37 N81-15363

**HEAT SINKS**

Thermal conductive, electrically insulated cleavable adhesive connection between electronic module and heat sink

[NASA-CASE-XMS-02087] c09 N70-41717  
Development and characteristics of calorimeter with integral heat sink for maintenance of constant temperature

[NASA-CASE-XMF-04208] c33 N71-29051  
Tubular sublimatory evaporator heat sink

[NASA-CASE-ABC-10912-1] c34 N77-19353  
Compact pulsed laser having improved heat conductance

[NASA-CASE-NPC-13147-1] c36 N77-25502  
Hypersonic airbreathing missile

[NASA-CASE-LAR-12264-1] c15 N78-32168  
Electroexplosive device

[NASA-CASE-NPO-13858-1] c28 N79-11231  
Thermal control canister

[NASA-CASE-GSC-12253-1] c34 N79-31523  
Radiative cooler

[NASA-CASE-NPO-15465-1] c18 N82-10106

**HEAT SOURCES**

Black body radiometer design with temperature sensing and cavity heat source cone winding

[NASA-CASE-XNP-09701] c14 N71-26475  
Thermally cascaded thermoelectric generator with radioisotopic heat source

[NASA-CASE-NPC-10753] c03 N72-26031  
Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft

[NASA-CASE-LEW-11227-1] c73 N75-30876  
Portable electrophoresis apparatus using minimum electrolyte

[NASA-CASE-NPC-13274-1] c25 N79-10163

**HEAT STORAGE**

Solar energy trap

[NASA-CASE-MFS-22744-1] c44 N76-24696  
Thermal energy storage system --- operating on superheating of liquids

[NASA-CASE-MFS-23167-1] c44 N76-31667

**HEAT TRANSFER**

Thermal switch for transferring excess heat from one region to another heat dissipating one

[NASA-CASE-XNF-00463] c33 N70-36847  
Sandwich panel structure for removing heat from shield between hot and cold areas

[NASA-CASE-XLA-00349] c33 N70-37979  
Apparatus for cryogenic liquid storage with heat transfer reduction and for liquid transfer at zero gravity conditions

[NASA-CASE-XLE-00345] c15 N70-38020  
Method for improving heat transfer characteristics in nucleate boiling process

[NASA-CASE-XMS-04268] c33 N71-16277  
Design and development of device for cooling inner conductor of coaxial cable

[NASA-CASE-XNP-09775] c09 N71-20445  
Heat sensing instrument, using thermocouple junction connected under heavy conducting material

[NASA-CASE-XLA-01551] c14 N71-22989  
Mixed liquid and vapor phase analyzer design with thermocouples for relative heat transfer measurement

[NASA-CASE-NFO-10691] c14 N71-26199  
Development and characteristics of cooling system to maintain temperature of rack mounted electronic modules

[NASA-CASE-MSC-12389] c33 N71-29052  
Development of method and equipment for testing heat radiative properties of material under controlled environmental conditions

[NASA-CASE-MFS-20096] c14 N71-30026  
Manually activated heat pump for mechanically converting human operator output into heat energy

[NASA-CASE-NFO-10677] c05 N72-11084  
High intensity radiant energy pulse source for calibrating heat transfer gages with thermoluminescent shutter activation

[NASA-CASE-ABC-10178-1] c09 N72-17152  
Development of thermocouple instrument for measuring temperature of wall heated by flowing fluid without disturbing boundary layer

[NASA-CASE-XLE-05230] c14 N72-27410  
Development and characteristics of thermal control system for maintaining constant temperature within spacecraft module with wide variations of component heat transfer

[NASA-CASE-GSC-11018-1] c31 N73-30829

- Thermal flux transfer system for maintaining thrust chamber of operative reaction motor at given temperatures  
[NASA-CASE-NPO-12070-1] c28 N73-32606
- Electrostatically controlled heat transfer system for conducting thermal energy  
[NASA-CASE-NPO-11942-1] c33 N73-32818
- Heat transfer device  
[NASA-CASE-NPO-11120-1] c34 N74-18552
- Heat exchanger  
[NASA-CASE-MFS-22991-1] c34 N77-10463
- Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c34 N78-17336
- Low cost cryostat  
[NASA-CASE-NPO-14513-1] c35 N81-14287
- Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c34 N81-22310
- Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c44 N81-24519
- A stable density-stratification solar pond  
[NASA-CASE-NPO-15419-1] c44 N81-27599
- HEAT TRANSMISSION**
- Heat flow calorimeter --- measures output of Ni-Cd batteries  
[NASA-CASE-GSC-11434-1] c34 N74-27859
- Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c73 N75-30E76
- Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c44 N81-27598
- HEAT TREATMENT**
- High speed infrared furnace  
[NASA-CASE-XLE-10466] c17 N69-25147
- Oven for heat treating heat shields  
[NASA-CASE-XMS-04318] c15 N69-27E71
- Vacuum method for molding thermosetting compounds used as ablative materials  
[NASA-CASE-XLA-01691] c15 N71-10672
- Production of refractory bodies with controlled porosity by pressing and heating mixtures of refractory and inert metal powders  
[NASA-CASE-LEW-10393-1] c17 N71-15468
- White paint production by heating impure aluminum silicate clay having low solar absorptance  
[NASA-CASE-XNP-02139] c18 N71-24184
- Method for diffusion welding dissimilar metals in vacuum chamber  
[NASA-CASE-GSC-10303] c15 N72-22487
- Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c26 N74-10521
- Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c37 N74-21055
- Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c54 N75-27761
- Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c26 N75-29236
- Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c45 N76-31714
- Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c26 N78-24333
- Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c35 N79-33450
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c26 N80-28492
- Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c28 N82-12240
- HEATERS**
- Reliable electrical element heater using plural wire system and backup power sources  
[NASA-CASE-MFS-21462-1] c33 N74-14935
- HEATING**
- Development of system for preheating vaporized fuel for use with internal combustion engines  
[NASA-CASE-NFO-12072] c28 N72-22772
- Diffusion welding in air --- solid state welding of butt joint by fusion welding, surface cleaning, and heating  
[NASA-CASE-LEW-11387-1] c37 N74-18128
- Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c39 N80-25693
- An improved synthesis of 2,4,8,10-tetroxaspiro (5.5) undecane  
[NASA-CASE-ARC-11243-2] c23 N80-31472
- HEATING EQUIPMENT**
- Using heat control unit to preheat circulating fluid  
[NASA-CASE-XMF-04237] c33 N71-16278
- Electric arc heater with supersonic nozzle and fixed arc length for use in high temperature wind tunnels  
[NASA-CASE-XAC-01677] c09 N71-20816
- Radial heat flux transformer for use in heating and cooling processes  
[NASA-CASE-NFO-10828] c33 N72-17948
- Self-cycling fluid heater for heating continuous fluid stream to ultrahigh temperatures to facilitate chemical reactions  
[NASA-CASE-MSC-15567-1] c33 N73-16918
- Portable heatable container  
[NASA-CASE-NPO-14237-1] c44 N80-20808
- HELICAL ANTENNAS**
- Weatherproof helix antenna  
[NASA-CASE-XKS-08485] c07 N71-19493
- Collapsible high gain antenna which can be automatically expanded to operating state  
[NASA-CASE-KSC-10392] c07 N73-26117
- HELICOPTER WAKES**
- Variable geometry rotor system for direct control over wake vortex  
[NASA-CASE-LAR-10557] c02 N72-11018
- HELICOPTERS**
- Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c05 N77-17029
- Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c35 N78-24515
- Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c05 N79-17847
- Helicopter rotor airfoil  
[NASA-CASE-LAR-12396-1] c02 N79-24958
- HELIOSTATS**
- Solar tracking system  
[NASA-CASE-MFS-23999-1] c44 N81-24520
- HELIUM**
- Helium refining by superfluidity  
[NASA-CASE-XNP-00733] c06 N70-34946
- Apparatus and method capable of receiving large quantity of high pressure helium, removing impurities, and discharging at received pressure  
[NASA-CASE-XMF-06888] c15 N71-24044
- Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c36 N76-29575
- Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NFO-13459-1] c31 N77-10229
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c31 N79-17029
- HELIUM HYDROGEN ATMOSPHERES**
- Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c25 N80-20334
- HELIUM IONS**
- Charge transfer reaction laser with preionization means  
[NASA-CASE-NFO-13945-1] c36 N78-27402
- HELIUM-NEON LASERS**
- Design and development of multichannel laser remote control system using modulated helium-neon laser as transmitter and light collector as receiving antenna  
[NASA-CASE-LAR-10311-1] c16 N73-16536
- Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c36 N81-24422
- HELMETS**
- Transparent polycarbonate resin, shell helmet and latch design for high altitude and space flight  
[NASA-CASE-XMS-04935] c05 N71-11190
- Electrode attached to helmets for detecting low level signals from skin of living creatures  
[NASA-CASE-ARC-10043-1] c05 N71-11193
- Venting device for pressurized space suit helmet to eliminate vomit expelled by crewmen

- [NASA-CASE-XMS-09652-1] c05 N71-26333  
 Helmet latching and attaching ring  
 [NASA-CASE-XMS-04670] c54 N78-17678  
 Protective garment ventilation system  
 [NASA-CASE-XMS-04928] c54 N78-17679  
 Helmet feedport  
 [NASA-CASE-XMS-09653] c54 N78-17680  
 Emergency space-suit helmet  
 [NASA-CASE-MSC-10954-1] c54 N78-18761  
 Helmet weight simulator  
 [NASA-CASE-LAR-12320-1] c54 N81-27806
- HEMISPHERICAL SHELLS**  
 Light baffle with oblate hemispheroid surface  
 and shading flange  
 [NASA-CASE-NPO-10337] c14 N71-15604
- HERMETIC SEALS**  
 Piston in bore cutter for severing parachute  
 control lines and sealing cable hole to  
 prevent water leakage into load  
 [NASA-CASE-XMS-04072] c15 N70-42017  
 Hermetically sealed explosive release mechanism  
 for actuator device  
 [NASA-CASE-XGS-00824] c15 N71-16078  
 Sealing apparatus for joining two pieces of  
 frangible materials  
 [NASA-CASE-XLA-01494] c15 N71-24164  
 Method for locating leaks in hermetically sealed  
 containers  
 [NASA-CASE-ERC-10045] c15 N71-24910  
 Hermetically sealed vibration damper design for  
 use in gimbal assembly of spacecraft inertial  
 guidance system  
 [NASA-CASE-MSC-10959] c15 N71-26243  
 Method of forming ceramic to metal seals  
 impervious to gaseous and liquid mercury at  
 high temperature  
 [NASA-CASE-XNP-01263-2] c15 N71-26312  
 Pressure seals suitable for use in environmental  
 test chambers  
 [NASA-CASE-NPO-1C796] c15 N71-27068  
 Hermetic sealing device for ends of tubular  
 bodies during materials testing operations  
 [NASA-CASE-NPO-10431] c15 N71-29132  
 Hermetically sealed elbow actuator for use in  
 severe environments  
 [NASA-CASE-MFS-14710] c09 N72-22195  
 Heat transfer device  
 [NASA-CASE-NPO-11120-1] c34 N74-18552  
 Device for tensing test specimens within an  
 hermetically sealed chamber  
 [NASA-CASE-MFS-23281-1] c35 N77-22450  
 Cooling system for removing metabolic heat from  
 an hermetically sealed spacesuit  
 [NASA-CASE-ARC-11059-1] c54 N78-32721
- HEXAGONS**  
 Hexagon solar power panel  
 [NASA-CASE-NPO-12148-1] c44 N78-27515
- HEXAMETHYLENETETRAAMINE**  
 Structural wood panels with improved fire  
 resistance  
 [NASA-CASE-ARC-11174-1] c24 N81-13999
- HEXOKINASE**  
 Use of enzyme hexokinase and glucose to reduce  
 inherent light levels of ATP in luciferase  
 compositions  
 [NASA-CASE-XGS-05533] c04 N69-27487
- HIGH ACCELERATION**  
 Astronaut restraint suit for high acceleration  
 protection  
 [NASA-CASE-XAC-00405] c05 N70-41819
- HIGH ALTITUDE**  
 Compact bellows spirometer for high speed and  
 high altitude space travel  
 [NASA-CASE-XAR-01547] c05 N69-21473
- HIGH ALTITUDE ENVIRONMENTS**  
 Method of making solid propellant rocket motor  
 having reliable high altitude capabilities,  
 long shelf life, and capable of firing with  
 nozzle closure with foamed plastic permanent  
 mandrel  
 [NASA-CASE-XLA-04126] c28 N71-26779
- HIGH ASPECT RATIO**  
 Aerospace configuration with low and high aspect  
 ratio variability for high and low speed flight  
 [NASA-CASE-XLA-00142] c02 N70-33286  
 Aerodynamic configuration for aircraft capable  
 of high speed flight and low drag for low  
 speed takeoff or landing upon presently  
 existing airfields
- [NASA-CASE-XLA-00806] c02 N70-34858
- HIGH FREQUENCIES**  
 Apparatus for ballasting high frequency  
 transistors  
 [NASA-CASE-XGS-05003] c09 N69-24318  
 Holder for high frequency crystal resonators  
 [NASA-CASE-XNP-03637] c15 N71-21311  
 Multiple varactor for generating high  
 frequencies with high power and high  
 conversion efficiency  
 [NASA-CASE-XMF-04958-1] c10 N71-26414  
 Filtering technique based on high-frequency  
 plant modeling for high-gain control  
 [NASA-CASE-LAR-12215-1] c08 N79-23097
- HIGH GAIN**  
 Filtering technique based on high-frequency  
 plant modeling for high-gain control  
 [NASA-CASE-LAR-12215-1] c08 N79-23097
- HIGH PASS FILTERS**  
 Radio frequency coaxial filter to provide dc  
 isolation and low frequency signal rejection  
 in audio range  
 [NASA-CASE-XGS-01418] c09 N71-23573
- HIGH POLYMERS**  
 Shock and vibration damping device using  
 temperature sensitive solid amorphous polymers  
 [NASA-CASE-XAC-11225] c14 N69-27486
- HIGH POWER LASERS**  
 High power metallic halide laser  
 [NASA-CASE-NFO-14782-1] c36 N80-18381  
 Large volume multiple-path nuclear pumped laser  
 [NASA-CASE-LAR-12592-1] c36 N82-13415
- HIGH PRESSURE**  
 High-temperature, high-pressure spherical  
 segment valve  
 [NASA-CASE-XAC-00074] c15 N70-34817  
 High pressure four-way valve with O ring adapted  
 to pass across inlet port  
 [NASA-CASE-XNP-00214] c15 N70-36908  
 Compact high pressure filter for rocket fuel lines  
 [NASA-CASE-XNP-00732] c28 N70-41447  
 Antiflutter check valve for use with high  
 pressure fluid flow  
 [NASA-CASE-XNP-01152] c15 N70-41811  
 High pressure liquid flow sight assembly for  
 wide temperature range applications including  
 cryogenic fluids  
 [NASA-CASE-XLF-02998] c14 N70-42074  
 Structural design of high pressure regulator valve  
 [NASA-CASE-XNP-00710] c15 N71-10778  
 Hypersonic test facility for studying ablation  
 in models under high pressure and high  
 temperature  
 [NASA-CASE-XLA-00378] c11 N71-15925  
 Development and characteristics of high pressure  
 control valve  
 [NASA-CASE-MSC-11010] c15 N71-19485  
 Valve seat with resilient support ring for  
 venting valves subjected to high pressure  
 sealing loads  
 [NASA-CASE-XKS-02582] c15 N71-21234  
 Apparatus and method capable of receiving large  
 quantity of high pressure helium, removing  
 impurities, and discharging at received pressure  
 [NASA-CASE-XMF-06888] c15 N71-24044  
 Liquid aerosol dispenser with explosively driven  
 piston to compress light gas to extremely high  
 pressure  
 [NASA-CASE-MFS-20829] c12 N72-21310  
 Gas compression apparatus  
 [NASA-CASE-MSC-14757-1] c35 N78-10428  
 Purging means and method for Xenon arc lamps  
 [NASA-CASE-NPO-11978] c31 N78-17238  
 Shaft seal assembly for high speed and high  
 pressure applications  
 [NASA-CASE-LEW-11873-1] c37 N79-22475
- HIGH RESOLUTION**  
 High resolution radar transmitting system for  
 transmitting optical pulses to targets  
 [NASA-CASE-NPO-11426] c07 N73-26119  
 High resolution Fourier  
 interferometer-spectrophotopolarimeter  
 [NASA-CASE-NFC-13604-1] c35 N76-31490  
 High resolution threshold photoelectron  
 spectroscopy by electron attachment  
 [NASA-CASE-NPO-14078-1] c72 N80-14877  
 Interferometer -- high resolution  
 [NASA-CASE-NFO-14448-1] c74 N81-29963

## HIGH SPEED

Compact bellows spirometer for high speed and high altitude space travel  
[NASA-CASE-XAR-01547] c05 N69-21473

High speed low level voltage commutating switch  
[NASA-CASE-XAC-00060] c09 N70-39915

Impact testing machine for imparting large impact forces on high velocity packages  
[NASA-CASE-XNP-04817] c14 N71-23225

Flow meter for measuring stagnation pressure in boundary layer around high speed flight vehicle  
[NASA-CASE-XFB-02007] c12 N71-24692

Method for reducing mass of ball bearings for long life operation at high speed  
[NASA-CASE-LEW-10856-1] c15 N72-22490

Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c75 N76-14931

Selective data segment monitoring system --- using shift registers  
[NASA-CASE-ABC-10899-1] c60 N77-19760

Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c37 N79-22475

**HIGH SPEED CAMERAS**  
Electrically operated rotary shutter for television camera aboard spacecraft  
[NASA-CASE-XNP-00637] c14 N70-40273

**HIGH STRENGTH**  
Method for making fiber composites with high strength at high temperatures  
[NASA-CASE-LEW-10424-2-2] c18 N72-25539

**HIGH STRENGTH ALLOYS**  
High strength, corrosion resistant cobalt-based alloys for aerospace structures  
[NASA-CASE-XLE-00726] c17 N71-15644

High strength aluminum casting alloy for cryogenic applications in aerospace engineering  
[NASA-CASE-XMF-02786] c17 N71-20743

Production of high strength refractory compounds and microconstituents into refractory metal matrix  
[NASA-CASE-XLE-C3940] c18 N71-26153

High strength nickel based alloys  
[NASA-CASE-LEW-10874-1] c17 N72-22535

Cobalt-tungsten alloys with superior strength at elevated temperatures  
[NASA-CASE-LEW-10436-1] c17 N73-32415

High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c26 N80-32484

**HIGH STRENGTH STEELS**  
Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c24 N76-14203

Process for making a high toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-2] c26 N79-22271

**HIGH TEMPERATURE**  
High temperature source of thermal radiation  
[NASA-CASE-XLE-00490] c33 N70-34545

Thermionic diode switch for use in high temperature region to chop current from dc source  
[NASA-CASE-NFO-10404] c03 N71-12255

Hypersonic test facility for studying ablation in models under high pressure and high temperature  
[NASA-CASE-XLA-00378] c11 N71-15925

Process for fiberizing ceramic materials with high fusion temperatures and tensile strength  
[NASA-CASE-XNP-00597] c18 N71-23088

Induction heating of metallurgical specimens to high temperatures in coil furnace  
[NASA-CASE-XLE-04026] c14 N71-23267

Method of forming ceramic to metal seals impervious to gaseous and liquid mercury at high temperature  
[NASA-CASE-XNP-01263-2] c15 N71-26312

Method for making fiber composites with high strength at high temperatures  
[NASA-CASE-LEW-10424-2-2] c18 N72-25539

Superalloys from prealloyed powders at high temperatures  
[NASA-CASE-LEW-10805-1] c15 N73-13465

High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c33 N76-15373

Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c44 N77-32581

Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c35 N79-14346

High thermal power density heat transfer --- thermionic converters  
[NASA-CASE-LEW-12950-1] c34 N82-11399

**HIGH TEMPERATURE AIR**  
Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c12 N73-28144

**HIGH TEMPERATURE ENVIRONMENTS**  
High speed infrared furnace  
[NASA-CASE-XLF-10466] c17 N69-25147

Nickel alloy series for aerospace structures subjected to high temperatures  
[NASA-CASE-XLF-00283] c17 N70-36616

Water cooled gage for strain measurements in high temperature environments  
[NASA-CASE-XNP-09205] c14 N71-17657

Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c33 N76-21390

Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c31 N76-31365

Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c37 N81-14317

Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c26 N81-25188

**HIGH TEMPERATURE FLUIDS**  
Self-cycling fluid heater for heating continuous fluid stream to ultrahigh temperatures to facilitate chemical reactions  
[NASA-CASE-MSC-15567-1] c33 N73-16918

High-temperature microphone system --- for measuring pressure fluctuations in gases at high temperature  
[NASA-CASE-LAR-12375-1] c32 N79-24203

**HIGH TEMPERATURE GASES**  
Multiple wavelength radiation measuring instrument for determining hot body or gas temperature  
[NASA-CASE-XLF-00011] c14 N70-41946

Ablative resins used for retarding regression in ablative material  
[NASA-CASE-XLF-05913] c33 N71-14032

Transient heat transfer gage for measuring total radiant intensity from far ultraviolet and ionized high temperature gases  
[NASA-CASE-XNP-09802] c33 N71-15641

Generation of high temperature, high mass flow, and high Reynolds number air at hypersonic speeds  
[NASA-CASE-LAR-10578-1] c12 N73-25262

Isotope separation using metallic vapor lasers  
[NASA-CASE-NFO-13550-1] c36 N77-26477

Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NPO-13849-1] c28 N80-10374

Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c37 N80-31790

Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c34 N81-12363

Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c37 N81-25370

**HIGH TEMPERATURE LUBRICANTS**  
Production of barium fluoride-calcium fluoride composite lubricant for bearings or seals  
[NASA-CASE-XLF-08511-2] c18 N71-16105

Self lubricating fluoride-metal composite materials for outer space applications  
[NASA-CASE-XLF-08511] c18 N71-23710

Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c24 N79-17916

**HIGH TEMPERATURE FLASMAS**  
Apparatus for producing highly conductive, high temperature electron plasma with homogenous temperature and pressure distribution  
[NASA-CASE-XLA-00147] c25 N70-34661

**HIGH TEMPERATURE PROPELLANTS**  
Development of system for delivering vaporized mercury to electron bombardment ion engine  
[NASA-CASE-NPO-10737] c28 N72-11709

**HIGH TEMPERATURE RESEARCH**  
Gas cooled high temperature thermocouple  
[NASA-CASE-XLF-09475-1] c33 N71-15568



- Fatigue testing apparatus with light shield and infrared reflector for high temperature evaluation of loaded sheet samples  
[NASA-CASE-XLA-01782] c14 N71-26136
- High temperature oxidation resistant cermet compositions  
[NASA-CASE-NFO-13666-1] c27 N77-13217
- HIGH TEMPERATURE TESTS**
- High-temperature, high-pressure spherical segment valve  
[NASA-CASE-XAC-00074] c15 N70-34817
- Test apparatus for determining mechanical properties of refractory materials at high temperatures in vacuum or inert atmospheres  
[NASA-CASE-XLE-00335] c14 N70-35368
- Apparatus for testing metallic and nonmetallic beams or rods by bending at high temperatures in vacuum or inert atmosphere  
[NASA-CASE-XLE-01300] c15 N70-41993
- Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c39 N80-25693
- Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c35 N81-19426
- HIGH VACUUM**
- Epoxy resin sealing device for electrochemical cells in high vacuum environments  
[NASA-CASE-XGS-02630] c03 N71-22974
- Device for high vacuum film deposition with electromagnetic ion steering  
[NASA-CASE-NPO-10331] c09 N71-26701
- Absolute pressure measuring device for measuring gas density level in high vacuum range  
[NASA-CASE-LAR-10000] c14 N73-30394
- Plasma cleaning device --- designed for high vacuum environments  
[NASA-CASE-MFS-22906-1] c75 N78-27913
- HIGH VACUUM ORBITAL SIMULATOR**
- Space environmental work simulator with portions of space suit mounted to vacuum chamber wall  
[NASA-CASE-XMF-07488] c11 N71-18773
- HIGH VOLTAGES**
- Hollow spherical electrode for shielding dielectric junction between high voltage conductor and insulator  
[NASA-CASE-XLE-03778] c09 N69-21542
- High voltage cable for use in high intensity ionizing radiation fields  
[NASA-CASE-XNP-06738] c09 N70-38201
- High voltage pulse generator for testing flash and ignition limits of nonmetallic materials in controlled atmospheres  
[NASA-CASE-MSC-12178-1] c09 N71-13518
- High voltage transistor circuit  
[NASA-CASE-XNP-06937] c09 N71-19516
- High voltage divider system for attenuating high voltages to convenient levels suitable for introduction to measuring circuits  
[NASA-CASE-XLE-02008] c09 N71-21583
- High voltage distributor  
[NASA-CASE-GSC-11849-1] c33 N76-16332
- Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c33 N77-28385
- High voltage planar multi-junction --- solar cells  
[NASA-CASE-LEW-13400-1] c44 N81-16528
- HIGHWAYS**
- Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c66 N76-19888
- HINGES**
- Foldable beam  
[NASA-CASE-LAR-12077-1] c31 N81-25259
- HISTOGRAMS**
- System for storing histogram data in optimum number of elements  
[NASA-CASE-XNP-09785] c08 N69-21928
- HOLDERS**
- Water cooled contactors for holding rotating carbon arc anode  
[NASA-CASE-XMS-03700] c15 N69-24266
- Quick disconnect latch and handle combination for mounting articles on walls or supporting bases in spacecraft under zero gravity conditions  
[NASA-CASE-MFS-11132] c15 N71-17649
- Holder for high frequency crystal resonators  
[NASA-CASE-XNP-03637] c15 N71-21311
- Design and construction of mechanical probe for determining if object is properly secured  
[NASA-CASE-MFS-20760] c14 N72-33377
- Fifth wheel  
[NASA-CASE-FRC-10081-1] c37 N77-14477
- Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c37 N77-23483
- Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c74 N78-33913
- Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c37 N80-23655
- Fixture for environmental exposure of structural materials under compression  
[NASA-CASE-LAR-12602-1] c35 N81-19429
- Compression test fixture  
[NASA-CASE-MSC-18723-1] c39 N81-24470
- Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NFO-15227-1] c37 N81-33482
- Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c37 N82-11469
- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c37 N82-12441
- HOLE DISTRIBUTION (MECHANICS)**
- Thermocouple installation  
[NASA-CASE-NPO-13540-1] c35 N77-14409
- HOLE MOBILITY**
- Hole mobility of deposited semiconductor films in vacuum utilizing thermal gradient  
[NASA-CASE-XKS-04614] c15 N69-21460
- HOLLOW**
- Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c44 N79-10513
- HOLLOW CATHODES**
- Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c72 N80-33186
- HOLOGRAPHIC INTERFEROMETRY**
- Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c35 N81-12386
- Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c35 N81-27459
- HOLOGRAPHY**
- Development of focused image holography with extended sources  
[NASA-CASE-ERC-10019] c16 N71-15551
- Hybrid holographic system using reference, transmitted, and reflected beams simultaneously  
[NASA-CASE-MFS-20074] c16 N71-15565
- Recording and reconstructing focused image holograms  
[NASA-CASE-ERC-10017] c16 N71-15567
- Method and means for recording and reconstructing holograms without use of reference beam  
[NASA-CASE-ERC-10020] c16 N71-26154
- Multiple image storing system for obtaining holographic record on film of high speed projectile  
[NASA-CASE-MFS-20596] c14 N72-17324
- Thin film analyzer utilizing holographic techniques  
[NASA-CASE-MFS-20823-1] c16 N73-30476
- Method and apparatus for checking the stability of a setup for making reflection type holograms  
[NASA-CASE-MFS-21455-1] c35 N74-15146
- Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c35 N74-17153
- Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c35 N74-26946
- Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c35 N75-25124
- Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c35 N75-27328
- Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MFS-22517-1] c35 N76-18402
- Optical process for producing classification maps from multispectral data  
[NASA-CASE-MSC-14472-1] c43 N77-10584
- HOMING DEVICES**
- Location identification system with ground based transmitter and aircraft borne receiver/decoder  
[NASA-CASE-ERC-10324] c07 N72-25173
- HONEYCOMB CORES**
- Technique for making foldable, inflatable, plastic honeycomb core panels for use in

- building and bridge structures, light and radio wave reflectors, and spacecraft  
[NASA-CASE-XLA-03492] c15 N71-22713
- Heat treatment and tooling for forming shapes from thermosetting honeycomb core sheets  
[NASA-CASE-NPO-11036] c15 N72-24522
- honeycomb core structures of minimum surface tubule sections  
[NASA-CASE-ERC-10363] c18 N72-25541
- HONEYCOMB STRUCTURES**
- Filling honeycomb matrix with deaerated paste filler  
[NASA-CASE-XMS-01108] c15 N69-24322
- Inflatable honeycomb panel element for lightweight structures usable in space stations and other construction  
[NASA-CASE-XLA-00204] c32 N70-36536
- Fluid flow control valve for regulating fluids in molecular quantities  
[NASA-CASE-XLE-00703] c15 N71-15967
- Method and apparatus for fabrication of heat insulating and ablative reentry structure  
[NASA-CASE-XMS-02009] c33 N71-20834
- Method for honeycomb panel bonding by thermosetting film adhesive with electrical heat means  
[NASA-CASE-XMF-01402] c18 N71-21651
- Development of thermal insulation material for insulating liquid hydrogen tanks in spacecraft  
[NASA-CASE-XMF-05046] c33 N71-28892
- honeycomb panels of minimal surface, periodic tubule layers  
[NASA-CASE-ERC-10364] c18 N72-25540
- Development of process for bonding resinous body in cavities of honeycomb structures  
[NASA-CASE-MSC-12357] c15 N73-12489
- Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c37 N74-25968
- Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c37 N76-24575
- Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c24 N78-15180
- Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c24 N78-17149
- Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c24 N79-16915
- HORIZON SCANNERS**
- Oscillatory electromagnetic mirror drive system for horizon scanners  
[NASA-CASE-XLA-03724] c14 N69-27461
- Multi-lobar scan horizon sensor  
[NASA-CASE-XGS-00809] c21 N70-35427
- Attitude orientation control of spin stabilized final stage space vehicles, using horizon scanners  
[NASA-CASE-XLA-00281] c21 N70-36943
- Clamped amplifier circuit for horizon scanner enabling amplification and accurate measurement of specified parameters  
[NASA-CASE-XGS-01784] c10 N71-20782
- Horizon sensor design with digital sampling of spaced radiation-compensated thermopile infrared detectors  
[NASA-CASE-XNP-06957] c14 N71-21088
- Method and equipment for locating earth infrared horizon from space, independent of season and latitude  
[NASA-CASE-LAR-10726-1] c14 N73-20475
- HORIZONTAL SPACECRAFT LANDING**
- Delta winged, manned reentry vehicle capable of horizontal glide landing at low speeds  
[NASA-CASE-XLA-00241] c31 N70-37986
- HORIZONTAL TAIL SURFACES**
- Development and characteristics of translating horizontal tail assembly for supersonic aircraft  
[NASA-CASE-XLA-08801-1] c02 N71-11043
- HORN ANTENNAS**
- Device for improving efficiency of parabolic horn antenna system for linearly polarized signals  
[NASA-CASE-XNP-00611] c09 N70-35219
- Device for improving efficiency of parabolic reflector horn for linearly or circularly polarized waves  
[NASA-CASE-XNP-00540] c09 N70-35382
- Characteristics of antenna horn feeds consisting of central horn with overlapping peripheral horns  
[NASA-CASE-GSC-10452] c07 N71-12396
- Multiple mode horn antenna with radiation pattern of equal beamwidths and suppressed sidelobes  
[NASA-CASE-XNP-01057] c07 N71-15907
- Multipurpose microwave antenna, employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c07 N72-25174
- Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c32 N76-15330
- Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NFC-13568-1] c32 N76-21365
- Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NFC-14022-1] c32 N78-31321
- Dual band combiner for horn antenna  
[NASA-CASE-NFC-14519-1] c32 N80-23524
- Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c32 N80-29539
- Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c32 N81-25278
- HOT CATHODES**
- Improved cathode containing barium carbonate block and heated tungsten screen for electron bombardment ion thruster  
[NASA-CASE-XLE-07087] c06 N69-39889
- HOT CORROSION**
- Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c34 N81-22310
- HOT PRESSING**
- Cermet for nuclear fuel constructed by pressing metal coated ceramic particles in die at temperature to cause bonding of metal coatings, and tested for thermal stability  
[NASA-CASE-LEW-10219-1] c18 N71-28729
- Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c37 N81-16470
- HOT WORKING**
- Hot forming of plastic sheets  
[NASA-CASE-XMS-05516] c15 N71-17803
- HOT-WIRE ANEMOMETERS**
- Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c35 N77-20400
- Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c35 N77-24454
- HOT-WIRE FLOWMETERS**
- Hot-wire liquid level detector for cryogenic propellants  
[NASA-CASE-XLE-00454] c23 N71-17802
- Flow separation detector  
[NASA-CASE-ARC-11046-1] c35 N78-14364
- HOUSINGS**
- Sealed housing for protecting electronic equipment against electromagnetic interference  
[NASA-CASE-MSC-12168-1] c09 N71-18600
- Open type urine receptacle with tubular housing  
[NASA-CASE-MSC-12324-1] c05 N72-22093
- Readily assembled universal environment housing for electronic equipment  
[NASA-CASE-KSC-10031] c15 N72-22486
- Gas flow control device, including housing and input port  
[NASA-CASE-NPO-11479] c15 N73-13462
- Cryogenic gyroscope housing --- with annular disks for gas spin-up  
[NASA-CASE-MFS-21136-1] c35 N74-18323
- Heat transfer device  
[NASA-CASE-NPO-11120-1] c34 N74-18552
- Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c37 N77-32500
- HOVERING**
- Hovering type flying vehicle design and principle mechanisms for manned or unmanned use  
[NASA-CASE-MSC-12111-1] c02 N71-11039
- HUGENIOT EQUATION OF STATE**
- Determining particle density using known material Hugoniot curves  
[NASA-CASE-LAR-11059-1] c76 N75-12810
- HULLS (STRUCTURES)**
- Efficient operation of improved hydrofoil design  
[NASA-CASE-XLA-00229] c12 N70-33305

## HUMAN BEINGS

Method and apparatus for applying compressional forces to skeletal structure of subject to simulate force during ambulatory conditions  
[NASA-CASE-ARC-10100-1] c05 N71-24738

Automatic braking device for rapidly transferring humans or materials from elevated location  
[NASA-CASE-XKS-07814] c15 N71-27067

## HUMAN BODY

Apparatus for measuring human body mass in zero or reduced gravity environment  
[NASA-CASE-XMS-03371] c05 N70-42000

Electromedical garment, applying vectorcardiologic type electrodes to human torsos for data recording during physical activity  
[NASA-CASE-XFR-10856] c05 N71-11189

Thermoregulating with cooling flow pipe network for humans  
[NASA-CASE-XMS-10269] c05 N71-24147

Tilting table for testing human body in variety of positions while exercising on ergometer or other biomedical devices  
[NASA-CASE-MFS-21010-1] c05 N73-30078

Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c52 N77-14737

## HUMAN FACTORS ENGINEERING

Shock absorbing couch for body support under high acceleration or deceleration forces  
[NASA-CASE-XMS-01240] c05 N70-35152

Harness assembly adapted to support man on ground based apparatus which simulates weightlessness  
[NASA-CASE-MFS-14671] c05 N71-12341

Multiple circuit switch apparatus requiring minimum hand and eye movement by operator  
[NASA-CASE-XAC-03777] c10 N71-15909

Remote control device operated by movement of finger tips for manual control of spacecraft attitude  
[NASA-CASE-XAC-02405] c09 N71-16089

Design and development of flexible tunnel for use by spacecrews in performing extravehicular activities  
[NASA-CASE-MSC-12243-1] c05 N71-24728

Development of apparatus and method for quantitatively measuring brain activity as automatic indication of sleep state and level of consciousness  
[NASA-CASE-MSC-13282-1] c05 N71-24729

Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c54 N78-31735

Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c54 N78-31736

Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c52 N79-27836

Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c54 N81-15699

Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c52 N81-25661

Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c52 N81-28740

Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c04 N82-16059

## HUMAN PERFORMANCE

Color perception tester for testing color code perceptiveness of individuals  
[NASA-CASE-KSC-10278] c05 N72-16015

## HUMAN REACTIONS

Reaction tester for testing reaction to light stimuli  
[NASA-CASE-MSC-13604-1] c05 N73-13114

## HUMAN WASTES

Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c54 N74-20725

Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c54 N76-14804

Absorbent product and articles made therefrom --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c24 N81-16127

## HUMIDITY

Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c33 N80-23559

Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c31 N80-32583

## HYBRID COMPUTERS

Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c62 N74-14920

## HYBRID PROPELLANTS

Liner for hybrid solid propellants to bind propellant to rocket motor case  
[NASA-CASE-XNF-09744] c27 N71-16392

## HYDRAULIC CONTROL

Shear modulated fluid amplifier of high pressure hydraulic vortex amplifier type  
[NASA-CASE-MFS-10412] c12 N71-17578

Throttle valve for regulating fluid flow volume  
[NASA-CASE-XNF-09698] c15 N71-18580

Fluidic-thermochromic display device  
[NASA-CASE-ERC-10031] c12 N71-18603

Development and characteristics of variable displacement fluid pump for transforming hydraulic pressures  
[NASA-CASE-MFS-20830] c15 N71-30028

Hydraulic drain means for servo-systems  
[NASA-CASE-NFO-10316-1] c37 N77-22479

## HYDRAULIC EQUIPMENT

Hydraulic support equipment for full scale dynamic testing of large rocket vehicle under free flight conditions  
[NASA-CASE-XMF-01772] c11 N70-41677

Hydraulic support apparatus for dynamic testing of space vehicles under near-free flight conditions  
[NASA-CASE-XMF-03248] c11 N71-10604

Hydraulic drive mechanism for leveling isolation platforms  
[NASA-CASE-XMS-03252] c15 N71-10658

Antibacklash circuit for hydraulic drive system  
[NASA-CASE-XNP-01020] c03 N71-12260

Hydraulic clamping of sheet stock specimens  
[NASA-CASE-XLA-05100] c15 N71-17696

Design and development of double acting shock absorber for spacecraft docking operations  
[NASA-CASE-XMS-03722] c15 N71-21530

Hydraulic apparatus for casting and molding of liquid polymers  
[NASA-CASE-XNP-07659] c06 N71-22975

System to control speed of hydraulically movable members by limiting energy applied to actuators with hydraulic servo loop  
[NASA-CASE-ARC-10131-1] c15 N71-27754

Development of aircraft control system with high performance electrically controlled and mechanically operated hydraulic valves for precise flight operation  
[NASA-CASE-XAC-00048] c02 N71-29128

Development and characteristics of variable displacement fluid pump for transforming hydraulic pressures  
[NASA-CASE-MFS-20830] c15 N71-30028

Design and characteristics of mechanically extended and telescoping boom on crane assembly  
[NASA-CASE-NFC-11118] c03 N72-25021

Design and development of device to prevent geysering during convective circulation of cryogenic fluids  
[NASA-CASE-KSC-10615] c15 N73-12486

Redundant hydraulic control system for actuators with three main valve combination  
[NASA-CASE-MFS-20944] c15 N73-13466

Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c37 N75-15050

Ultrasonically bonded valve assembly  
[NASA-CASE-NFO-13360-1] c37 N75-25185

Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MSC-14273-1] c34 N75-33342

Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c37 N76-14463

Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c52 N77-14735

Phase-angle controller for Stirling engines  
[NASA-CASE-NFO-14388-1] c37 N81-17432

A gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c37 N81-24445

Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c43 N81-26509

## HYDRAULIC FLUIDS

Free-piston regenerative hot gas hydraulic engine

- [NASA-CASE-LEW-12274-1] c37 N80-31790
- HYDRAZINE ENGINES**
- Reciprocating engines
- [NASA-CASE-MSC-16239-1] c37 N81-32510
- HYDRAZINE NITROFORM**
- Solid propellant containing hydrazinium nitroformate oxidizer and polymeric hydrocarbon binder
- [NASA-CASE-NPO-12015] c27 N73-16764
- HYDRAZINES**
- Catalyst bed ignition system for hydrazine propellants
- [NASA-CASE-XNP-OC876] c28 N70-41311
- Hydrazine monoperfluoro alkanoate solder flux leaving corrosion resistant coating, for metals such as copper
- [NASA-CASE-XNP-03459-2] c18 N71-15688
- Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine
- [NASA-CASE-NPO-12122-1] c24 N76-14203
- HYDROCARBON COMBUSTION**
- In-situ laser retorting of oil shale
- [NASA-CASE-LEW-12217-1] c43 N78-14452
- HYDROCARBON FUEL PRODUCTION**
- Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub
- [NASA-CASE-NPO-14315-1] c27 N81-17261
- HYDROCARBON FUELS**
- Apparatus for producing hydrocarbon slurry containing small particles of magnesium for use as jet aircraft fuel
- [NASA-CASE-XLE-00010] c15 N70-33382
- Hydrogen rich gas generator
- [NASA-CASE-NPO-13342-2] c44 N76-29700
- Hydrogen rich gas generator
- [NASA-CASE-NPO-13464-2] c44 N76-29704
- HYDROCARBONS**
- Solid propellant containing hydrazinium nitroformate oxidizer and polymeric hydrocarbon binder
- [NASA-CASE-NPO-12015] c27 N73-16764
- Hydrogen rich gas generator
- [NASA-CASE-NPO-13342-1] c37 N76-16446
- Combustion engine --- for air pollution control
- [NASA-CASE-NPO-13671-1] c37 N77-31497
- Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same
- [NASA-CASE-NPO-13137-1] c27 N80-32514
- HYDROCHLORIC ACID**
- Indicator providing continuous indication of the presence of a specific pollutant in air
- [NASA-CASE-NPO-13474-1] c45 N76-21742
- HYDROFOILS**
- Efficient operation of improved hydrofoil design
- [NASA-CASE-XLA-00229] c12 N70-33305
- HYDROFORMING**
- Cold metal hydroforming techniques using epoxy molds for counteracting creep or stretch
- [NASA-CASE-XLE-05641-1] c15 N71-26346
- HYDROGEN**
- Method and transducer device for detecting presence of hydrogen gas
- [NASA-CASE-XMF-03873] c06 N69-39733
- Preventing pressure buildup in electrochemical cells by reacting palladium oxide with evolved hydrogen
- [NASA-CASE-XGS-01419] c03 N70-41864
- Development of pulse-activated polarographic hydrogen detector
- [NASA-CASE-XMF-06531] c14 N71-17575
- Development of device for detecting hydrogen in ambient environments
- [NASA-CASE-MFS-11537] c14 N71-20442
- Gas chromatographic method for analyzing hydrogen deuterium mixtures
- [NASA-CASE-NPO-11322] c06 N72-25146
- Hydrogen fire blink detector for high altitude rocket or ground installation
- [NASA-CASE-MFS-15063] c14 N72-25412
- Separation of dissolved hydrogen from water and coating with palladium black
- [NASA-CASE-MSC-13355-1] c06 N72-31140
- Atomic hydrogen maser with bulb temperature control by output frequency difference signal for wall shift elimination
- [NASA-CASE-BQN-10654-1] c16 N73-13489
- Method of producing a storage bulb for an atomic hydrogen maser
- [NASA-CASE-NPO-13050-1] c36 N75-15029
- Atomic standard with variable storage volume
- [NASA-CASE-GSC-11895-1] c35 N76-15436
- Hydrogen rich gas generator
- [NASA-CASE-NPO-13342-1] c37 N76-16446
- Hydrogen-bromine secondary battery
- [NASA-CASE-NFO-13237-1] c44 N76-18641
- Hydrogen-rich gas generator
- [NASA-CASE-NPO-13464-1] c44 N76-18642
- Solar hydrogen generator
- [NASA-CASE-LAR-11361-1] c44 N77-22607
- Solar photolysis of water
- [NASA-CASE-NFO-13675-1] c44 N77-32580
- Method and automated apparatus for detecting coliform organisms
- [NASA-CASE-MSC-16777-1] c51 N80-27067
- Method of cross-linking polyvinyl alcohol and other water soluble resins
- [NASA-CASE-LEW-13103-1] c27 N80-32516
- HYDROGEN ATOMS**
- Atomic hydrogen storage method and apparatus
- [NASA-CASE-LEW-12081-1] c28 N78-24365
- Atomic hydrogen storage --- cryotrapping and magnetic field strength
- [NASA-CASE-LEW-12081-2] c28 N80-20402
- Atomic hydrogen storage method and apparatus
- [NASA-CASE-LEW-12081-3] c28 N81-14103
- HYDROGEN EMBRITTLEMENT**
- Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine
- [NASA-CASE-NFO-12122-1] c24 N76-14203
- HYDROGEN ENGINES**
- Hydrogen-fueled engine
- [NASA-CASE-NFO-13763-1] c44 N78-33526
- HYDROGEN FUELS**
- Hydrogen rich gas generator
- [NASA-CASE-NPO-13342-2] c44 N76-29700
- Hydrogen rich gas generator
- [NASA-CASE-NPO-13464-2] c44 N76-29704
- Hydrogen-rich gas generator
- [NASA-CASE-NPO-13560-1] c44 N77-10636
- HYDROGEN IONS**
- Hydrogen hollow cathode ion source
- [NASA-CASE-LEW-12940-1] c72 N80-33186
- HYDROGEN OXYGEN FUEL CELLS**
- Electrolytically regenerative hydrogen-oxygen fuel cells
- [NASA-CASE-XLE-04526] c03 N71-11052
- Water electrolysis rocket engine with self-regulating stoichiometric fuel mixing regulator
- [NASA-CASE-XGS-08729] c28 N71-14044
- HYDROGEN PEROXIDE**
- Unit for generating thrust from catalytic decomposition of hydrogen peroxide, for high altitude aircraft or spacecraft reaction control
- [NASA-CASE-XMS-00583] c28 N70-38504
- HYDROGEN PRODUCTION**
- Start up system for hydrogen generator used with an internal combustion engine
- [NASA-CASE-NPO-13849-1] c28 N80-10374
- Potential heat exchange fluids for use in sulfuric acid vaporizers
- [NASA-CASE-NPO-15015-1] c25 N80-23394
- HYDROGENATION**
- Producing high purity silicon carbide on carbon base by hydrogen reduction of silicon tetrachloride
- [NASA-CASE-XLA-00158] c26 N70-36805
- Compact hydrogenator
- [NASA-CASE-NFO-11682-1] c35 N74-15127
- Hydrodesulfurization of chlorinated coal
- [NASA-CASE-NPO-15304-1] c28 N82-12240
- HYDROLOGY**
- Radar target for remotely sensing hydrological phenomena
- [NASA-CASE-LAR-12344-1] c43 N80-18498
- HYDROLYSIS**
- Thermal control coatings based on trialkoxysilane hydrolyzate binders --- tolerance to ultraviolet radiation in vacuum
- [NASA-CASE-MFS-25620-1] c24 N82-11118
- HYDROSTATICS**
- Hydrostatic bearing support
- [NASA-CASE-LEW-11158-1] c37 N77-28486
- HYDROXIDES**
- Method for determining presence and type of OH

in MgO  
[NASA-CASE-NPO-10774] c06 N72-17095

**HYDROXYL COMPOUNDS**  
Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c23 N82-16174

**HYGIENE**  
Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c52 N81-28740

**HYGROMETERS**  
Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c35 N78-25391

**HYGROSCOPICITY**  
Method of evaluating moisture barrier properties  
of materials used in electronics encapsulation  
[NASA-CASE-NPO-10051] c18 N71-24934

**HYPERFINE STRUCTURE**  
Process for producing dispersion strengthened  
nickel with aluminum comprising metallic  
matrices embedded with oxides or other  
hyperfine compounds  
[NASA-CASE-XLE-06969] c17 N71-24142

**HYPERGOLIC ROCKET PROPELLANTS**  
Solid propellant ignition with hypergolic fluid  
injected to predetermined portions of propellant  
[NASA-CASE-XLE-00207] c28 N70-33375  
Regenerative cooling system for small rocket  
engine having restart capability and using  
noncryogenic hypergolic propellants  
[NASA-CASE-XLE-00685] c28 N70-41992  
Method for igniting solid propellant rocket  
motors by injecting hypergolic fluids  
[NASA-CASE-XLE-01988] c27 N71-15634

**HYPERSONIC AIRCRAFT**  
Multistage aerospace craft --- perspective  
drawings of conceptual design  
[NASA-CASE-XMF-02263] c05 N74-10907

**HYPERSONIC FLIGHT**  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c15 N78-32168

**HYPERSONIC FLOW**  
Design of hypersonic test facility for ablation  
tests and performance tests of vehicles under  
conditions of high temperature and pressure  
[NASA-CASE-XLA-05378] c11 N71-21475

**HYPERSONIC SPEED**  
Leading edge design for hypersonic reentry  
vehicles  
[NASA-CASE-XLA-00165] c31 N70-33242  
Aerospace vehicle with variable planform for  
hypersonic and subsonic flight  
[NASA-CASE-XLA-00805] c31 N70-38010  
Variable geometry manned orbital vehicle having  
high aerodynamic efficiency over wide speed  
range and incorporating auxiliary pivotal wings  
[NASA-CASE-XLA-03691] c31 N71-15674  
Supersonic or hypersonic vehicle control system  
comprising elevons with hinge line sweep and  
free of adverse aerodynamic cross coupling  
[NASA-CASE-XLA-08967] c02 N71-27088  
Generation of high temperature, high mass flow,  
and high Reynolds number air at hypersonic  
speeds  
[NASA-CASE-LAR-10578-1] c12 N73-25262  
Apparatus and method for generating large mass  
flow of high temperature air at hypersonic  
speeds  
[NASA-CASE-LAR-10612-1] c12 N73-28144

**HYPERSONIC VEHICLES**  
Carbon dioxide purge systems to prevent  
condensation in spaces between cryogenic fuel  
tanks and hypersonic vehicle skin  
[NASA-CASE-XLA-01967] c31 N70-42015

**HYPERSONIC WIND TUNNELS**  
A rectangular rod-wall sound shield  
[NASA-CASE-LAR-12883-1] c09 N81-29138

**HYPERVELOCITY GUNS**  
Method and apparatus for use in forming highly  
collimated beam of microparticles with high  
charge to mass ratio and injecting beam into  
electrostatic accelerating tube  
[NASA-CASE-XGS-06628] c24 N71-16213  
Implosion driven, light gas, hypervelocity gun  
[NASA-CASE-XAC-05902] c11 N71-18578  
Collapsible piston for hypervelocity gun  
[NASA-CASE-MSC-13789-1] c11 N73-32152  
Hypervelocity gun --- using both electric and  
chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c09 N79-21084

**HYPERVELOCITY IMPACT**

Method of and device for determining the  
characteristics and flux distribution of  
micrometeorites --- scanning puncture holes in  
sheet material with photoelectric cell  
[NASA-CASE-NPO-12127-1] c91 N74-13130

**HYPERVELOCITY PROJECTILES**

Impact measuring technique for determining size  
of hypervelocity projectiles  
[NASA-CASE-LAR-10913] c14 N72-16282  
Multiple image storing system for obtaining  
holographic record on film of high speed  
projectile  
[NASA-CASE-MFS-20596] c14 N72-17324

**HYPERVELOCITY WIND TUNNELS**

Hypersonic test facility for studying ablation  
in models under high pressure and high  
temperature  
[NASA-CASE-XLA-00378] c11 N71-15925  
Design of hypersonic test facility for ablation  
tests and performance tests of vehicles under  
conditions of high temperature and pressure  
[NASA-CASE-XLA-05378] c11 N71-21475

**HYSTERESIS**

Belleville spring assembly with elastic guides  
having low hysteresis  
[NASA-CASE-XNP-09452] c15 N69-27504

**IGNITERS**

Characteristics of solid propellant rocket  
engine with controlled rate of thrust buildup  
operating in vacuum environment  
[NASA-CASE-NPO-11559] c28 N73-24784  
Remote fire stack igniter --- with  
solenoid-controlled valve  
[NASA-CASE-MFS-21675-1] c25 N74-33378  
Molded composite pyrogen igniter for rocket motors  
--- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275  
Plasma igniter for internal combustion engine  
[NASA-CASE-NPC-13828-1] c37 N79-11405

**IGNITION**

Magnetically controlled plasma accelerator  
capable of ignition in low density gaseous  
environment  
[NASA-CASE-XLA-00327] c25 N71-29184

**IGNITION LIMITS**

High voltage pulse generator for testing flash  
and ignition limits of nonmetallic materials  
in controlled atmospheres  
[NASA-CASE-MSC-12178-1] c09 N71-13518

**IGNITION SYSTEMS**

Solid propellant ignition with hypergolic fluid  
injected to predetermined portions of propellant  
[NASA-CASE-XLE-00207] c28 N70-33375  
Ignition system for monopropellant combustion  
devices  
[NASA-CASE-XNF-00249] c28 N70-38249  
Igniter capsule for chemical ignition of liquid  
rocket propellants  
[NASA-CASE-XLE-00323] c28 N70-38505  
Catalyst bed ignition system for hydrazine  
propellants  
[NASA-CASE-XNP-00876] c28 N70-41311  
Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c33 N77-28385

**IGNITION TEMPERATURE**

Test chamber for determining decomposition and  
autoignition of materials used in spacecraft  
under controlled environmental conditions  
[NASA-CASE-KSC-10198] c11 N71-28629

**ILLUMINATORS**

Camera adapter design for image magnification  
including lens and illuminator  
[NASA-CASE-XMF-03844-1] c14 N71-26474  
Illumination system design for use as sunlight  
simulator in space environment simulators with  
multiple light sources reflected to single  
virtual source  
[NASA-CASE-HCN-10781] c23 N71-30292  
Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c74 N81-22894

**IMAGE CONTRAST**

Video signal enhancement of signal component  
representing brightness of scene element in  
low contrast  
[NASA-CASE-NPC-10343] c07 N71-27341

# IMAGE CONVERTERS

Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c74 N77-28932

**IMAGE CONVERTERS**

Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c36 N75-19652

Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c33 N76-27473

Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c35 N79-33449

Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c33 N80-28635

**IMAGE CORRELATORS**

Multiple pattern holographic information storage and readout system  
[NASA-CASE-ERC-10151] c16 N71-29131

Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014

Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c32 N79-14268

An electro-optical Doppler tracker means and method for optical correlation of synthetic aperture radar data  
[NASA-CASE-NPO-14998-1] c33 N81-15194

Optical signature generating and correlating apparatus  
[NASA-CASE-NPO-15226-1] c74 N81-19899

**IMAGE DISSECTOR TUBES**

Apparatus for calibrating an image dissector tube  
[NASA-CASE-MFS-22208-1] c33 N75-26244

Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c74 N76-19935

**IMAGE ENHANCEMENT**

Electron beam scanning system for improved image definition and reduced power requirements for video signal transmission  
[NASA-CASE-ERC-10552] c09 N71-12539

Physical correction filter for improving the optical quality of an image  
[NASA-CASE-HQN-10542-1] c74 N75-25706

Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c35 N79-10389

**IMAGE FILTERS**

Filter arrangement for controlling light intensity in motion picture camera used in optical pyrometry  
[NASA-CASE-XLA-00062] c14 N70-33254

Development and characteristics of spectroradiometer with wedge filters to eliminate adverse effect of pinholes in filters  
[NASA-CASE-HQN-10683] c14 N71-34389

Physical correction filter for improving the optical quality of an image  
[NASA-CASE-HQN-10542-1] c74 N75-25706

**IMAGE INTENSIFIERS**

Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c74 N78-18905

Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c35 N79-10389

**IMAGE PROCESSING**

Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c32 N79-14268

Interleaving device  
[NASA-CASE-GSC-12111-2] c33 N81-29342

**IMAGE TUBES**

Image tube --- deriving electron beam replica of image  
[NASA-CASE-GSC-11602-1] c33 N74-21850

System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c74 N77-18693

**IMAGES**

Camera adapter design for image magnification including lens and illuminator  
[NASA-CASE-XMF-03844-1] c14 N71-26474

Stereoscopic television system, including projecting pair of binocular images  
[NASA-CASE-ARC-10160-1] c23 N72-27728

**IMAGING TECHNIQUES**

Highly stable optical mirror assembly optimizing image quality of light diffraction patterns  
[NASA-CASE-ERC-10001] c23 N71-24868

Noise elimination in coherent imaging system by axial rotation of optical lens for spectral distribution of degrading affects  
[NASA-CASE-GSC-11133-1] c23 N72-11568

# SUBJECT INDEX

Phototransistor imaging system with mosaic of phototransistors on semiconductor substrate  
[NASA-CASE-MFS-20809] c23 N73-13660

Computerized optical system for producing multiple images of a scene simultaneously  
[NASA-CASE-MSC-12404-1] c23 N73-13661

Optical imaging system for increasing light absorption efficiency of imaging detector  
[NASA-CASE-ARC-10194-1] c23 N73-20741

Ritchey-Chretien telescope responsive to images located off telescope optical axis  
[NASA-CASE-GSC-11487-1] c14 N73-30393

Data storage, image tube type  
[NASA-CASE-MSC-14053-1] c60 N74-12888

Optical instruments  
[NASA-CASE-MSC-14096-1] c74 N74-15095

Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c35 N77-14408

Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c74 N77-28932

Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c09 N78-18083

Chromatically corrected virtual image display --- lens design for flight simulators  
[NASA-CASE-LAR-12251-1] c74 N79-14892

Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c43 N79-17288

System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NFO-14174-1] c74 N79-20856

Low intensity X-ray and gamma-ray imaging device --- fiber optics  
[NASA-CASE-GSC-12263-1] c74 N79-20857

Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c74 N80-21140

Low intensity X-ray and gamma-ray imaging spectrometer  
[NASA-CASE-GSC-12587-1] c35 N80-29635

Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c74 N80-33210

System for forming a quadrified image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c74 N81-17886

Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c33 N81-33403

Real-time 3D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c74 N82-10862

**IMIDES**

Synthesis and chemical properties of imidazopyrrolone/imide copolymers  
[NASA-CASE-XLA-08802] c06 N71-11238

Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c31 N74-13177

Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c27 N81-31364

**IMINES**

Synthesis of polymeric schiff bases by schiff-base exchange reactions  
[NASA-CASE-XMF-08651] c06 N71-11236

Direct synthesis of polymeric schiff bases from two amines and two aldehydes  
[NASA-CASE-XMF-08655] c06 N71-11239

Synthesis of schiff bases for heat shields by acetal amine reactions  
[NASA-CASE-XMF-08652] c06 N71-11243

Synthesis of aromatic diamines and dialdehyde polymers using Schiff base  
[NASA-CASE-XMF-03074] c06 N71-24740

**IMMOBILIZATION**

Stretcher with rigid head and neck support with capability of supporting immobilized person in vertical position for removal from vehicle hatch to exterior also useful as splint stretcher  
[NASA-CASE-XMF-06589] c05 N71-23159

Absolute focus locking device for microscopes to maintain set focus for extended time period  
[NASA-CASE-LAB-10184] c14 N72-22445

Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c52 N81-25662

**IMPACT**

Shock absorber for use as protective barrier in impact energy absorbing system

- [NASA-CASE-NFO-10671] c15 N72-20443  
System for detecting impact position of cosmic dust on detector surface
- [NASA-CASE-GSC-11291-1] c25 N72-33696  
Impact position detector for outer space particles
- [NASA-CASE-GSC-11829-1] c35 N75-27331
- IMPACT ACCELERATION**  
Suspended mass oscillation damper based on impact energy absorption for damping wind induced oscillations of tall stacks, antennas, and umbilical towers
- [NASA-CASE-LAR-10193-1] c15 N71-27146
- IMPACT DAMAGE**  
Measuring micrometeroid depth of penetration into various materials
- [NASA-CASE-XLA-00941] c14 N71-23240
- IMPACT LOADS**  
Piezoelectric transducer for detecting and measuring micrometeoroids
- [NASA-CASE-YAC-01101] c14 N70-41957
- Impact testing machine for imparting large impact forces on high velocity packages
- [NASA-CASE-XNP-04817] c14 N71-23225
- IMPACT RESISTANCE**  
Electric storage battery with high impact resistance
- [NASA-CASE-NPO-11021] c03 N72-20032
- Hybrid composite laminate structures
- [NASA-CASE-LBW-12118-1] c24 N77-27188
- IMPACT STRENGTH**  
High impact pressure regulator having minimum number of lightweight movable elements
- [NASA-CASE-NPO-10175] c14 N71-18625
- IMPACT TESTING MACHINES**  
Development and characteristics of penetrometer for measuring physical properties of lunar surface
- [NASA-CASE-XLA-00934] c14 N71-22765
- Impact testing machine for imparting large impact forces on high velocity packages
- [NASA-CASE-XNP-04817] c14 N71-23225
- IMPACT TOLERANCES**  
High impact antennas with high radiating efficiency
- [NASA-CASE-NPO-10231] c07 N71-26101
- Vehicular impact absorption system
- [NASA-CASE-NPO-14014-1] c37 N79-10420
- IMPEDANCE MATCHING**  
Impedance transformation device for signal mixing
- [NASA-CASE-XGS-01110] c07 N69-24334
- Reflectometer for receiver input impedance match measurement
- [NASA-CASE-XNP-10843] c07 N71-11267
- Radio frequency coaxial filter to provide dc isolation and low frequency signal rejection in audio range
- [NASA-CASE-XGS-01418] c09 N71-23573
- Pattern and impedance matching improvements in transversely polarized triaxial antenna
- [NASA-CASE-XGS-02290] c07 N71-28809
- IMPEDANCE MEASUREMENT**  
Development of electrical system for measuring high impedance
- [NASA-CASE-XMS-08589-1] c09 N71-20569
- Apparatus for measuring semiconductor device resistance
- [NASA-CASE-NFO-14424-1] c33 N80-32650
- IMPLANTATION**  
Biotelemetry apparatus with dual voltage generators for implanting in animals
- [NASA-CASE-XAC-05706] c05 N71-12342
- Magnetic electrical connectors for biomedical percutaneous implants
- [NASA-CASE-KSC-11030-1] c52 N77-25772
- IMPLANTED ELECTRODES (BIOLOGY)**  
An implantable electrical device
- [NASA-CASE-GSC-12560-1] c52 N80-27673
- Pocket ECG electrode
- [NASA-CASE-ARC-11258-1] c52 N80-33081
- Subcutaneous electrode structure
- [NASA-CASE-ARC-11117-1] c52 N81-14612
- IMPLSIONS**  
Implosion driven, light gas, hypervelocity gun
- [NASA-CASE-XAC-05902] c11 N71-18578
- IMPREGNATING**  
Composite lamination method
- [NASA-CASE-LAR-12019-1] c24 N78-17150
- Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith
- [NASA-CASE-NPO-13530-1] c25 N81-17187
- IMPULSE GENERATORS**  
Percutaneous connector device
- [NASA-CASE-KSC-10849-1] c52 N77-14738
- IMPURITIES**  
Fabrication of sintered impurity semiconductor brushes for electrical energy transfer
- [NASA-CASE-IMP-01016] c26 N71-17818
- Method of mitigating titanium impurities effects in p-type silicon material for solar cells
- [NASA-CASE-NPO-14635-1] c44 N80-24741
- IN-FLIGHT MONITORING**  
System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations
- [NASA-CASE-PRC-11024-1] c02 N80-28300
- INCIDENCE**  
Method of and means for testing a glancing-incidence mirror system of an X-ray telescope
- [NASA-CASE-MFS-22409-2] c74 N78-15880
- INCIDENT RADIATION**  
Solar cell assembly --- for use under high intensity illumination
- [NASA-CASE-LBW-11549-1] c44 N77-19571
- INCLINATION**  
Hingeless helicopter rotor with improved stability
- [NASA-CASE-ABC-10807-1] c05 N77-17029
- INCOHERENT SCATTERING**  
Rapidly pulsed, high intensity, incoherent light source
- [NASA-CASE-XLF-2529-3] c33 N74-20859
- INDICATING INSTRUMENTS**  
Piezoelectric means for missile stage separation indication and stage initiation
- [NASA-CASE-XLA-00791] c03 N70-39930
- Inductive liquid level detection system
- [NASA-CASE-XLE-01609] c14 N71-10500
- Apparatus for determining quality of bond between high density material and low density material
- [NASA-CASE-MFS-13686] c15 N71-18132
- Device for detecting hydrogen fires onboard high altitude rockets
- [NASA-CASE-MFS-13130] c10 N72-17173
- Fatigue failure load indicator
- [NASA-CASE-LAR-12027-1] c39 N79-22537
- System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation
- [NASA-CASE-PRC-11005-1] c06 N82-16075
- INDIUM ALLOYS**  
Method for attaching a fused-quartz mirror to a conductive metal substrate
- [NASA-CASE-MFS-23405-1] c26 N77-29260
- Solar cell collector
- [NASA-CASE-LBW-12552-1] c44 N78-25527
- INDUCTANCE**  
Current dependent variable inductance for input filter chokes of ac or dc power supplies
- [NASA-CASE-ERC-10139] c09 N72-17154
- Inductance device with vacuum insulation and materials of low gas entrapping capability
- [NASA-CASE-LBW-10330-1] c09 N72-27226
- Direct reading inductance meter
- [NASA-CASE-NFO-13792-1] c35 N77-32455
- INDUCTION HEATING**  
Induction heating of metallurgical specimens to high temperatures in coil furnace
- [NASA-CASE-XLE-04026] c14 N71-23267
- One step dual purpose joining technique
- [NASA-CASE-LAR-12595-1] c37 N80-11469
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt
- [NASA-CASE-NFO-14297-1] c33 N81-19389
- INDUCTION MOTORS**  
Voltage controlled oscillator circuit for two-phase induction motor control
- [NASA-CASE-MFS-21465-1] c10 N73-32145
- Variable frequency inverter for ac induction motors with torque, speed and braking control
- [NASA-CASE-MFS-22088-1] c33 N75-15874
- Power factor control system for AC induction motors
- [NASA-CASE-MFS-23280-1] c33 N78-10376
- Magnetic field control --- electromechanical torquing devices
- [NASA-CASE-MFS-23828-1] c33 N80-17359



- Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c33 N81-12330
- Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c33 N81-27395
- Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c33 N82-11360
- INDUCTORS**
- Inductive liquid level detection system  
[NASA-CASE-XLF-01609] c14 N71-10500
- Describing apparatus used in vacuum deposition of thin film inductive windings for spacecraft microcircuitry  
[NASA-CASE-XMP-01667] c15 N71-17647
- Double-induction variable speed system for constant-frequency electrical power generation  
[NASA-CASE-ERC-10065] c09 N71-27364
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c33 N81-19393
- INDUSTRIAL PLANTS**
- Simplified technique and device for producing industrial grade synthetic diamonds  
[NASA-CASE-MFS-20698-2] c15 N73-19457
- INDUSTRIAL WASTES**
- Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MSC-14831-1] c25 N76-10225
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NFO-13847-2] c85 N79-17747
- INERT ATMOSPHERE**
- Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c35 N82-11432
- INERTIA**
- Gearing system for eliminating backlash and filtering input torque fluctuations from high inertia load  
[NASA-CASE-XGS-04227] c15 N71-21744
- INERTIAL GUIDANCE**
- Hermetically sealed vibration damper design for use in gimbal assembly of spacecraft inertial guidance system  
[NASA-CASE-MSC-10959] c15 N71-26243
- INERTIAL NAVIGATION**
- Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c04 N81-21047
- INERTIAL PLATFORMS**
- Inertial component clamping assembly design for spacecraft guidance and control system mounting  
[NASA-CASE-XMS-02184] c15 N71-20813
- Inertial gimbal alignment system for spacecraft guidance  
[NASA-CASE-XMP-01669] c21 N71-23289
- Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NPO-13044-1] c35 N74-15094
- Attitude control system  
[NASA-CASE-MFS-22787-1] c15 N77-10113
- Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c18 N81-29152
- INERTIAL REFERENCE SYSTEMS**
- Development of attitude control system for spacecraft orientation  
[NASA-CASE-XGS-04393] c21 N71-14159
- Large amplitude, linear inertial reference system of vibrating string type for spacecraft reference plane  
[NASA-CASE-XAC-03107] c23 N71-16098
- INFLATABLE SPACECRAFT**
- Passive thermal control coating on aluminum foil laminate for inflatable spacecraft surfaces  
[NASA-CASE-XLA-01291] c33 N70-36617
- Erectable, inflatable, radio signal reflecting passive communication satellite  
[NASA-CASE-XLA-00210] c30 N70-40309
- Rotating, multisided mandrel for fabricating gored inflatable spacecraft  
[NASA-CASE-XLA-04143] c15 N71-17687
- Forming inflatable panels erectable in space for passive communication satellite  
[NASA-CASE-XLA-03497] c15 N71-23052
- Development and characteristics of inflatable structure to provide escape from orbit for spacecrews under emergency conditions  
[NASA-CASE-XMS-06162] c31 N71-28851
- INFLATABLE STRUCTURES**
- Aeroflexible wing structure with air scoop for inflating stiffeners with ram air  
[NASA-CASE-XLA-06095] c01 N69-39981
- Design of inflatable life raft for aircrafts and boats  
[NASA-CASE-XMS-00863] c05 N70-34857
- Lightweight life preserver without fastening devices  
[NASA-CASE-XMS-00864] c05 N70-36493
- Inflatable honeycomb panel element for lightweight structures usable in space stations and other construction  
[NASA-CASE-XLA-00204] c32 N70-36536
- Inflatable radar reflector unit - lightweight, highly reflective to electromagnetic radiation, and adaptable for erection and deployment with minimum effort and time  
[NASA-CASE-XMS-00893] c07 N70-40063
- Temperature sensor warning system for pneumatic tires of aircraft and ground vehicles  
[NASA-CASE-XLA-01926] c14 N71-15620
- Inflation system for balloon type satellites  
[NASA-CASE-XGS-03351] c31 N71-16081
- Development and characteristics of protective coatings for spacecraft  
[NASA-CASE-XMP-02507] c31 N71-17679
- Development and characteristics of self supporting space vehicle  
[NASA-CASE-XLA-00117] c31 N71-17680
- Conforming polisher for aspheric surfaces of revolution with inflatable tube  
[NASA-CASE-XGS-02884] c15 N71-22705
- Technique for making foldable, inflatable, plastic honeycomb core panels for use in building and bridge structures, light and radio wave reflectors, and spacecraft  
[NASA-CASE-XLA-03492] c15 N71-22713
- Collapsible antenna boom and coaxial transmission line having inflatable inner tube  
[NASA-CASE-MFS-20068] c07 N71-27191
- Space expandable tether device for use as passageway between two docked spacecraft  
[NASA-CASE-XMS-10993] c15 N71-28936
- Inflatable rocket engine nozzle skirt with transpiration cooling  
[NASA-CASE-MFS-20619] c28 N72-11708
- Modification of one man life raft  
[NASA-CASE-LAE-10241-1] c54 N74-14845
- Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c54 N78-18761
- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c37 N81-17433
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c54 N81-26718
- INFORMATION RETRIEVAL**
- Multiple pattern holographic information storage and readout system  
[NASA-CASE-ERC-10151] c16 N71-29131
- INFRARED DETECTORS**
- Temperature sensitive capacitor device for detecting very low intensity infrared radiation  
[NASA-CASE-XMP-09750] c14 N69-39937
- Sight switch using infrared source and sensor mounted beside eye  
[NASA-CASE-XMP-03934] c09 N71-22985
- Characteristics of infrared photodetectors manufactured from semiconductor material irradiated by electron beam  
[NASA-CASE-LAE-10728-1] c14 N73-12445
- Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c33 N75-31332
- Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c74 N80-33210
- Refrigerator module, system and process --- regenerative, cryogenic cooling of an infrared radiation detection system  
[NASA-CASE-ARC-11263-1] c31 N81-27328
- INFRARED INSTRUMENTS**
- Infrared scanning system for maintaining spacecraft orientation with earth reference  
[NASA-CASE-XLA-00120] c21 N70-33181

## INFRARED INTERFEROMETERS

Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c35 N78-18395

## INFRARED LASERS

Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c35 N74-11284  
Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26542  
Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c31 N79-17029

## INFRARED RADIATION

High speed infrared furnace  
[NASA-CASE-XLE-16466] c17 N69-25147  
High field Cds detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c35 N74-18088

## INFRARED REFLECTION

Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c32 N79-19186

## INFRARED SCANNERS

Infrared scanning system for maintaining spacecraft orientation with earth reference  
[NASA-CASE-XLA-00120] c21 N70-33181  
Method and equipment for locating earth infrared horizon from space, independent of season and latitude  
[NASA-CASE-LAR-10726-1] c14 N73-20475

## INFRARED SPECTRA

Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c36 N75-31426

## INFRARED SPECTROMETERS

Telespectrograph for analyzing upper atmosphere by tracking bodies reentering atmosphere at high velocities  
[NASA-CASE-XLA-03273] c14 N71-18699  
Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NPO-14372-1] c35 N80-26635

## INFRARED SPECTROSCOPY

Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c35 N79-14348

## INFRASONIC FREQUENCIES

Resonant infrasonic gauging device for measuring liquid quantity in closed bladderless reservoir  
[NASA-CASE-MSC-11847-1] c14 N72-11363

## INHIBITORS

Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c28 N79-14228

## INITIATORS (EXPLOSIVES)

Piezoelectric means for missile stage separation indication and stage initiation  
[NASA-CASE-XLA-00791] c03 N70-39930  
Electroexplosive safe-arm initiator using electric driven electromagnetic coils and magnets to align charge  
[NASA-CASE-LAR-10372] c09 N71-18599  
Electroexplosive device  
[NASA-CASE-NPO-13858-1] c28 N79-11231

## INJECTION

Foam insulation thickness measuring and injection device for spacecraft applications  
[NASA-CASE-MFS-20261] c14 N71-27005

## INJECTORS

Propellant injectors for rocket combustion chambers  
[NASA-CASE-XLE-00103] c28 N70-33241  
Fuel injection system for maximum combustion efficiency of rocket engines  
[NASA-CASE-XLE-00111] c28 N70-38199  
Injector manifold assembly for bipropellant rocket engines providing for fuel propellant to serve as coolant  
[NASA-CASE-XMF-00148] c28 N70-38710  
Method and apparatus for use in forming highly collimated beam of microparticles with high charge to mass ratio and injecting beam into electrostatic accelerating tube  
[NASA-CASE-IGS-06628] c24 N71-16213  
Control valve and coaxial variable injector for controlling bipropellant mixture ratio and flow  
[NASA-CASE-XNP-09702] c15 N71-17654

Rocket engine injector orifice to accommodate changes in density, velocity, and pressure, thereby maintaining constant mass flow rate of propellant into rocket combustion chamber  
[NASA-CASE-XLE-03157] c28 N71-24736

Bipropellant injector with pair of concave deflector plates  
[NASA-CASE-XNP-09461] c28 N72-23809

Coaxial injector for mixing liquid propellants within combustion chambers  
[NASA-CASE-NPO-11095] c15 N72-25455

Improved injector with porous plug for bubbles of gas into feed lines of electrically conductive liquid  
[NASA-CASE-NFO-11377] c15 N73-27406

Rocket injector head  
[NASA-CASE-XMF-04592-1] c20 N79-21125

## INLET FLOW

High pressure four-way valve with O ring adapted to pass across inlet port  
[NASA-CASE-XNP-00214] c15 N70-36908

Method for maintaining good performance in gas turbine during air flow distortion  
[NASA-CASE-LEW-10286-1] c28 N71-28915

Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c02 N74-20646

Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c07 N74-31270

Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11915-1] c35 N76-14431

Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c35 N77-24455

Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089

Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c05 N79-24976

## INLET NOZZLES

Rocket injector head  
[NASA-CASE-XMF-04592-1] c20 N79-21125

## INLET PRESSURE

Fluid jet amplifier with fluid from jet nozzle deflected by inlet pressure  
[NASA-CASE-XLE-03512] c12 N69-21466

Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11915-1] c35 N76-14431

## INOCULATION

Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
[NASA-CASE-LAR-11074-1] c51 N75-13502

## INORGANIC COATINGS

Composition of diffuse reflective coating containing sodium chloride in combination with diol solvent and organic wetting and drying agents  
[NASA-CASE-GSC-11214-1] c06 N73-13128

Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c27 N78-31233

Advanced inorganic separators for alkaline batteries and method of making same --- a polymeric coating applied to a porous flexible substrate  
[NASA-CASE-LEW-13171-1] c44 N81-22466

## INORGANIC COMPOUNDS

Inorganic ion exchange membrane electrolytes for fuel cell use  
[NASA-CASE-XNP-04264] c03 N69-21337

Preparation of inorganic solid film lubricants with long wear life and stability in aerospace environments  
[NASA-CASE-XMF-03988] c15 N71-21403

Modification of polyurethanes with alkyl halide resins, inorganic salts, and encapsulated volatile and reactive halogen for fuel fire control  
[NASA-CASE-ARC-10098-1] c06 N71-24739

Inorganic thermal control and solar reflector coatings  
[NASA-CASE-MFS-20011] c18 N72-22566

Inorganic-organic separators for alkaline batteries

- [NASA-CASE-LEW-12649-1] c44 N78-25530  
Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLF-02545-1] c76 N79-21910
- INORGANIC PEROXIDES**  
Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c26 N78-32229  
Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c25 N79-10162
- INPUT**  
Apparatus for filtering input signals  
[NASA-CASE-NPO-10198] c09 N71-24806  
RC networks with voltage amplifier, RC input circuit, and positive feedback  
[NASA-CASE-ARC-10020] c10 N72-17172  
High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c60 N81-27E14
- INPUT/OUTPUT ROUTINES**  
Analog to digital converter  
[NASA-CASE-NFO-13385-1] c33 N76-18345
- INSERTION**  
Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NFO-13910-1] c52 N79-27836
- INSERTION LOSS**  
High impedance alternating current sensing transformer device between two bolometers for measuring insertion loss of test component  
[NASA-CASE-XNP-01193] c10 N71-16057
- INSPECTION**  
Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c38 N78-17396  
System for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c02 N81-14967
- INSTALLING**  
Device for installing rocket engines  
[NASA-CASE-MPS-19220-1] c20 N76-22296  
Thermocouple installation  
[NASA-CASE-NPO-13540-1] c35 N77-14409
- INSTRUMENT ERRORS**  
Solar radiation direction detector and device for compensating degradation of photocells  
[NASA-CASE-XLA-00183] c14 N70-40239
- INSTRUMENT FLIGHT RULES**  
Controlled visibility device for simulating poor visibility conditions in training pilots in instrument landing and flight procedures  
[NASA-CASE-XPR-04147] c11 N71-10748
- INSTRUMENT ORIENTATION**  
Sensor consisting of photocells mounted on pyramidal base for improved pointing accuracy of planetary trackers  
[NASA-CASE-XNP-04180] c07 N69-39736  
Inertial gimbal alignment system for spacecraft guidance  
[NASA-CASE-XMF-01669] c21 N71-23289  
Optical gauging system for monitoring machine tool alignment  
[NASA-CASE-XAC-09489-1] c15 N71-26673  
Development of solar energy powered heliotrope assembly to orient solar array toward sun  
[NASA-CASE-GSC-10945-1] c21 N72-31637
- INSTRUMENT PACKAGES**  
Apparatus for ejecting covers of instrument packages using differential pressure principle  
[NASA-CASE-XMF-04132] c15 N69-27502  
Removable potting compound for instrument shock protection  
[NASA-CASE-XLA-00482] c15 N70-36409  
Plastic foam generator for space vehicle instrument payload package flotation in water landing  
[NASA-CASE-XLA-00838] c03 N70-36778  
High velocity guidance and spin stabilization gyro controlled jet reaction system for launch vehicle payloads  
[NASA-CASE-XLA-01339] c31 N71-15692  
Ethylene oxide sterilization and encapsulating process for sterile preservation of instruments and solid propellants  
[NASA-CASE-XNP-05763] c14 N71-20461  
Thermal control canister  
[NASA-CASE-GSC-12253-1] c34 N79-31523
- INSTRUMENTS**  
Method and apparatus for bowing of instrument panels to improve radio frequency shielded enclosure  
[NASA-CASE-XMF-09422] c07 N71-19436  
Design and development of pressure sensor for measuring differential pressures of few pounds per square inch  
[NASA-CASE-XMF-01974] c14 N71-22752  
Development of temperature compensated thrust measuring gage for measuring forces as function of time in environment with varying temperature  
[NASA-CASE-XGS-02319] c14 N71-22965  
Development and characteristics of self-calibrating displacement transducer for measuring magnitude and frequency of displacement of bodies  
[NASA-CASE-XLA-00781] c09 N71-22999  
Design, development, and characteristics of pressure and temperature sensor operating immersed in fluid flow  
[NASA-CASE-LEW-10281-1] c14 N72-17327  
Development of apparatus for mounting scientific experiments in spacecraft to permit utilization without maneuvering spacecraft  
[NASA-CASE-MSC-12372-1] c31 N72-25842  
Magnetic suspension and pointing system  
[NASA-CASE-LAB-11889-2] c37 N78-27424  
Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c37 N78-27425
- INSULATED STRUCTURES**  
Low thermal loss piping arrangement for moving cryogenic media through double chamber structure  
[NASA-CASE-XNP-08882] c15 N69-39935
- INSULATION**  
Electrode attached to helmets for detecting low level signals from skin of living creatures  
[NASA-CASE-ARC-10043-1] c05 N71-11193  
Characteristics of foamed-in-place ceramic refractory insulating material and method of fabrication  
[NASA-CASE-XGS-02435] c18 N71-22998  
Method of fabricating equal length insulated wire  
[NASA-CASE-FRC-10038] c15 N72-20444  
Inductance device with vacuum insulation and materials of low gas entrapping capability  
[NASA-CASE-LEW-10330-1] c09 N72-27226  
Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MSC-14339-1] c05 N75-24716  
Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c27 N76-22376  
Two-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-1] c27 N76-22377  
Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c27 N76-23426  
Field effect transistor and method of construction thereof  
[NASA-CASE-MPS-23312-1] c33 N78-27326  
Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MPS-23626-1] c24 N80-26388
- INSULATORS**  
High voltage insulators for direct current in acceleration system of electrostatic thruster  
[NASA-CASE-XLF-01902] c28 N71-10574  
High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c27 N78-19302
- INTAKE SYSTEMS**  
Deflector for preventing objects from entering nacelle inlets of jet aircraft  
[NASA-CASE-XLF-00388] c28 N70-34788  
The engine air intake system  
[NASA-CASE-ARC-10761-1] c07 N77-18154  
Fluid sampling device  
[NASA-CASE-GSC-12143-1] c35 N77-32456  
Passive propellant system  
[NASA-CASE-MPS-23642-1] c20 N80-10278  
Reciprocating engines  
[NASA-CASE-MSC-16239-1] c37 N81-32510
- INTEGRATED CIRCUITS**  
Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits  
[NASA-CASE-XNP-01753] c08 N71-22897

- Development and characteristics of electric circuitry for detecting electrical pulses rise time and amplitude  
[NASA-CASE-XMF-08804] c09 N71-24717
- Method and apparatus for testing integrated circuit microtab welds  
[NASA-CASE-ARC-10176-1] c15 N72-21464
- Single integrated circuit chip with field effect transistor  
[NASA-CASE-GSC-10835-1] c09 N72-33205
- Integrated circuit tangent function generator  
[NASA-CASE-MSC-13907-1] c10 N73-26230
- Inverted geometry transistor for use with monolithic integrated circuit  
[NASA-CASE-ARC-10330-1] c09 N73-32112
- Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c33 N74-12951
- Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c33 N74-34638
- Four phase logic systems --- including integrated microcircuits  
[NASA-CASE-MSC-14240-1] c33 N75-14957
- Integrable power gyrator --- with Z-matrix design using parallel transistors  
[NASA-CASE-MFS-22342-1] c33 N75-30428
- Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c38 N78-17395
- Complementary DMOS-V MOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c33 N79-12321
- A general logic structure for custom LSI circuits  
[NASA-CASE-NPO-14410-1] c33 N79-25314
- Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c33 N80-14332
- Digital demodulator  
[NASA-CASE-LAR-12659-1] c33 N80-31731
- Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c44 N81-12542
- Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c33 N81-17348
- High stability amplifier  
[NASA-CASE-GSC-12646-1] c33 N81-32391
- INTEGRATORS**
- Solid state operational integrator  
[NASA-CASE-NPO-10230] c09 N71-12520
- Variable duration pulse integrator design for integrating pulse duration modulated pulses with elimination of ripple content  
[NASA-CASE-XLA-01219] c10 N71-23084
- Solid state integrator for converting variable width pulses into analog voltage  
[NASA-CASE-XLA-03356] c10 N71-23315
- Feedback integrating circuit with grounded capacitor for signal processing  
[NASA-CASE-XAC-10607] c10 N71-23669
- High speed phase detector design indicating phase relationship between two square wave input signals  
[NASA-CASE-XNP-01306-2] c09 N71-24596
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c33 N81-31480
- INTERFACIAL TENSION**
- Passive propellant system  
[NASA-CASE-MFS-23642-1] c20 N80-10278
- INTERFEROMETERS**
- Describing device for velocity control of electromechanical drive mechanism of scanning mirror of interferometer  
[NASA-CASE-XGS-03532] c14 N71-17627
- Incremental motion drive system applied to interferometer components  
[NASA-CASE-XNP-08897] c15 N71-17694
- Design and development of optical interferometer with laser light source for application to schlieren systems  
[NASA-CASE-XLA-04295] c16 N71-24170
- Digital sensor for counting fringes produced by interferometers with improved sensitivity and one photomultiplier tube to eliminate alignment problem  
[NASA-CASE-LAR-10204] c14 N71-27215
- Two beam interferometer-polarimeter  
[NASA-CASE-NFO-11239] c14 N73-12446
- Interferometer prism and control system for precisely determining direction to remote light source  
[NASA-CASE-ARC-10278-1] c14 N73-25463
- High resolution Fourier interferometer-spectrophotopolarimeter  
[NASA-CASE-NPO-13604-1] c35 N76-31490
- Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NFC-13569-2] c35 N79-14348
- Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c35 N80-20563
- Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c35 N81-12386
- Interferometer  
[NASA-CASE-NPO-14502-1] c74 N81-17888
- Dual-beam skin friction interferometer --- portable equipment  
[NASA-CASE-ARC-11354-1] c36 N81-29415
- Interferometer --- high resolution  
[NASA-CASE-NPO-14448-1] c74 N81-29963
- Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c35 N81-33448
- INTERFEROMETRY**
- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c35 N79-10391
- Interferometric locating system  
[NASA-CASE-NPO-14173-1] c04 N80-32359
- INTERLAYERS**
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c24 N81-33235
- INTERMEDIATE FREQUENCIES**
- Doppler radar having phase modulation of both transmitted and reflected return signals --- ranging finding  
[NASA-CASE-MSC-18675-1] c32 N81-29312
- INTERMEDIATE FREQUENCY AMPLIFIERS**
- Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c32 N76-14321
- INTERMETALLICS**
- Controlled diffusion reaction process for masking substrate of twisted multifilament superconductive ribbon  
[NASA-CASE-LEW-11726-1] c26 N73-26752
- Production of intermetallic compounds by effect of shock waves from explosions and compaction of powder  
[NASA-CASE-MFS-20861-1] c18 N73-32437
- INTERNAL COMBUSTION ENGINES**
- Variable displacement fuel pump for internal combustion engines  
[NASA-CASE-MSC-12139-1] c28 N71-14058
- Detonation reaction engine comprising outer housing enclosing pair of inner walls for continuous flow  
[NASA-CASE-XMF-06926] c28 N71-22983
- Development of system for preheating vaporized fuel for use with internal combustion engines  
[NASA-CASE-NPO-12072] c28 N72-22772
- System for minimizing internal combustion engine pollution emission  
[NASA-CASE-NFC-13402-1] c37 N76-18457
- Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c37 N77-31497
- Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c44 N78-33526
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c37 N79-11405
- Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c35 N79-14345
- Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NFC-13849-1] c28 N80-10374
- Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c07 N81-29129
- Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c37 N81-29442
- INTERPLANETARY SPACE**
- Compact heat shielding for interplanetary space vehicles  
[NASA-CASE-XMS-00486] c33 N70-33344
- Active RC filter networks and amplifiers for deep space magnetic field measurement  
[NASA-CASE-XAC-05462-2] c10 N72-17171

## INTERPLANETARY SPACECRAFT

Transpirationally cooled heat ablation system  
for interplanetary spacecraft reentry shielding  
[NASA-CASE-XMS-02677] c31 N70-42075

## INTERPLANETARY TRAJECTORIES

Table structure and rotating magnet system  
simulating gravitational forces on spacecraft  
and displaying trajectories between Earth,  
Venus, and Mercury  
[NASA-CASE-XNP-00708] c14 N70-35394

## INTRACRANIAL PRESSURE

Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c52 N80-18691

## INTRAOCULAR PRESSURE

Intra-ocular pressure normalization technique  
and equipment  
[NASA-CASE-LEW-12955-1] c52 N80-14684  
Intra-ocular pressure normalization technique  
and equipment  
[NASA-CASE-LEW-12723-1] c52 N80-18690

## INTRA-VEHICULAR ACTIVITY

Intra- and extravehicular life support space  
suite for Apollo astronauts  
[NASA-CASE-MSC-12609-1] c05 N73-32012

## INTRAVENOUS PROCEDURES

Biomedical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c52 N81-24717

## INTRUSION

Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c33 N80-23559

## INVENTIONS

Active notch filter network with variable notch  
depth, width and frequency  
[NASA-CASE-FRC-11055-1] c33 N80-29583  
Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c54 N80-30043  
Ion-exchange hollow filters  
[NASA-CASE-NPO-13309-1] c25 N81-19244  
Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c33 N81-29344

## INVERTED CONVERTERS (DC TO AC)

Inverter ratio failure detector  
[NASA-CASE-NFO-13160-1] c35 N74-18090  
Variable frequency inverter for ac induction  
motors with torque, speed and braking control  
[NASA-CASE-MFS-22088-1] c33 N75-15874  
Solar cell system having alternating current  
output  
[NASA-CASE-LEW-12806-2] c44 N81-12542

## INVERTERS

Silicon controlled rectifier inverter with  
compensation of transients to avoid false gating  
[NASA-CASE-XLA-08507] c09 N69-39984  
Inverter oscillator with voltage feedback  
[NASA-CASE-NFO-10760] c09 N72-25254  
Overload protection system for power inverter  
[NASA-CASE-NPO-13872-1] c33 N78-10377  
Module failure isolation circuit for paralleled  
inverters --- preventing system failure during  
power conditioning for spacecraft applications  
[NASA-CASE-NFO-14000-1] c33 N79-24254  
Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c33 N81-14220  
Adaptive control system for line-commutated  
inverters  
[NASA-CASE-MFS-25209-1] c33 N81-31480  
Adaptive reference voltage generator for firing  
angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c33 N81-31481

## IODINE

Method of producing output voltage from  
photovoltaic cell using poly-N-vinyl carbazole  
complexed with iodine  
[NASA-CASE-NPO-10373] c03 N71-18698  
Gallium arsenide solar cell preparation by  
surface deposition of cuprous iodide on thin  
n-type polycrystalline layers and heating in  
iodine vapor  
[NASA-CASE-XNP-01960] c09 N71-23027  
Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c54 N78-14784

## IODINE COMPOUNDS

Perfluoroalkyl polytriazines containing pendent  
iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c25 N81-14016

## IODINE ISOTOPES

Production of I-123 for use as  
radiopharmaceutical for low radiation exposure  
[NASA-CASE-LEW-10518-1] c24 N72-33681

Method of producing I-123 --- by bombardment of  
cesium causing spallation  
[NASA-CASE-LEW-11390-2] c25 N76-27383  
Production of I-123  
[NASA-CASE-LEW-11390-3] c25 N76-29379

## ION ACCELERATORS

Helium outgassing process for fused glass  
coating on ion accelerator grid  
[NASA-CASE-LEW-10278-1] c15 N71-28582

## ION BEAMS

Ion beam deflector system for electronic thrust  
vector control for ion propulsion yaw, pitch,  
and roll forces  
[NASA-CASE-LEW-10689-1] c28 N71-26173  
Dispensing targets for ion beam particle  
generators  
[NASA-CASE-NPO-13112-1] c73 N74-26767  
Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c20 N74-31269  
Method of constructing dished ion thruster grids  
to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c20 N76-21276  
Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c20 N77-10148  
Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c25 N78-27226  
Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N81-19455

## ION CHARGE

Quadrupole mass spectrometer using noise  
spectrum for ion separation and identification  
[NASA-CASE-XNP-04231] c14 N73-32325

## ION CONCENTRATION

Deposition of alloy films --- on irregularly  
shaped metal object  
[NASA-CASE-LEW-11262-1] c27 N74-13270

## ION CURRENTS

System for monitoring presence of neutrals in  
streams of ions - ion engine control  
[NASA-CASE-XNP-02592] c24 N71-20518

## ION CYCLOTRON RADIATION

Ion and electron detector for use in an ICR  
spectrometer  
[NASA-CASE-NFO-13479-1] c35 N77-10492

## ION DENSITY (CONCENTRATION)

Method and apparatus for measurement of trap  
density and energy distribution in dielectric  
films  
[NASA-CASE-NFO-13443-1] c76 N76-20994

## ION ENGINES

Improved cathode containing barium carbonate  
block and heated tungsten screen for electron  
bombardment ion thruster  
[NASA-CASE-XLE-07087] c06 N69-39889  
High-vacuum condenser tank for testing ion  
rocket engines  
[NASA-CASE-XLE-00168] c11 N70-33278  
Encapsulated heater forming hollow body for  
cathode used in ion thruster  
[NASA-CASE-LEW-10814-1] c28 N70-35422  
Electrostatic ion engines using high velocity  
electrons to ionize propellant  
[NASA-CASE-XLE-00376] c28 N70-37245  
Metal ion rocket engine design  
[NASA-CASE-XLE-00342] c28 N70-37980  
Dynamometer measuring microforce thrust produced  
by ion engine  
[NASA-CASE-XLE-00702] c14 N70-40203  
Increasing available power per unit area in ion  
rocket engine by increasing beam density  
[NASA-CASE-XLE-00519] c28 N70-41576  
Accel and focus electrode design for ion engine  
with improved efficiency  
[NASA-CASE-XNP-02839] c28 N70-41922  
Ion engine with magnetic circuit for optimal  
discharge  
[NASA-CASE-XLE-01124] c28 N71-14043  
Electron bombardment ion rocket engine with  
improved propellant introduction system  
[NASA-CASE-XLE-02066] c28 N71-15661  
System for monitoring presence of neutrals in  
streams of ions - ion engine control  
[NASA-CASE-XNP-02592] c24 N71-20518  
Construction and method of arranging plurality  
of ion engines to form cluster thereby  
increasing efficiency and control by  
decreasing heat radiated to space  
[NASA-CASE-XNP-02923] c28 N71-23081

- Electronic cathodes for use in electron bombardment ion thrusters  
[NASA-CASE-XLE-04501] c09 N71-23190
- Permanently magnetized ion engine casing construction for use in spacecraft propulsion systems  
[NASA-CASE-XNP-06942] c28 N71-23293
- Development and characteristics of ion thruster accelerator with single glass coated grid to provide increased ion extraction capability and larger diameter accelerator system.  
[NASA-CASE-LEW-10106-1] c28 N71-26642
- Internal labyrinth and shield structure to improve electrical isolation of propellant feed source from ion thruster  
[NASA-CASE-LEW-10210-1] c28 N71-26781
- Low mass ionizing device for use in electric thrust spacecraft engines  
[NASA-CASE-XNP-01954] c28 N71-28850
- Development of system for delivering vaporized mercury to electron bombardment ion engine  
[NASA-CASE-NFO-10737] c28 N72-11709
- Characteristics of ion rocket engine with combination keeper electrode and electron baffles  
[NASA-CASE-NFO-11880] c28 N73-24783
- Single grid accelerator system for electron bombardment type ion thruster  
[NASA-CASE-XLE-10453-2] c28 N73-27699
- Method of making dish ion thruster grids  
[NASA-CASE-LEW-11694-1] c20 N75-18310
- Method of constructing dish ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c20 N76-21276
- ION EXCHANGE MEMBRANE ELECTROLYTES**
- Inorganic ion exchange membrane electrolytes for fuel cell use  
[NASA-CASE-XNP-04264] c03 N69-21337
- Development and characteristics of ion-exchange membrane and electrode assembly for fuel cells or electrolysis cells  
[NASA-CASE-XMS-02063] c03 N71-29044
- Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c44 N79-17313
- Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c25 N81-17187
- ION EXCHANGE RESINS**
- Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c44 N78-25530
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NFO-14101-1] c52 N80-14687
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NFO-14001-1] c27 N81-14076
- ION EXCHANGING**
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c27 N81-14076
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c25 N81-19244
- ION EXTRACTION**
- Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c25 N78-25148
- ION IMPLANTATION**
- Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c33 N81-26360
- ION IRRADIATION**
- Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c27 N80-24437
- ION PLATING**
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c44 N81-29524
- ION PROBES**
- Ion microprobe mass spectrometer with cooled electrode target for analyzing traces of fluids  
[NASA-CASE-ERC-10014] c14 N71-28863
- ION PROPULSION**
- Variable thrust ion engine using thermal decomposition of solid cesium compound to produce propulsive vapor  
[NASA-CASE-XMF-00923] c28 N70-36802
- Electrostatic ion engines using high velocity electrons to ionize propellant  
[NASA-CASE-XLE-00376] c28 N70-37245
- Metal ion rocket engine design  
[NASA-CASE-XLE-00342] c28 N70-37980
- Method for producing porous tungsten plates for ionizing cesium compounds for propulsion of ion engines  
[NASA-CASE-XLE-00455] c28 N70-38197
- Accel and focus electrode design for ion engine with improved efficiency  
[NASA-CASE-XNP-02839] c28 N70-41922
- Electric rocket engine with electron bombardment ionization chamber  
[NASA-CASE-XNP-04124] c28 N71-21822
- Ion beam deflector system for electronic thrust vector control for ion propulsion yaw, pitch, and roll forces  
[NASA-CASE-LEW-10689-1] c28 N71-26173
- Development and characteristics of ion thruster accelerator with single glass coated grid to provide increased ion extraction capability and larger diameter accelerator system  
[NASA-CASE-LEW-10106-1] c28 N71-26642
- Development of system for delivering vaporized mercury to electron bombardment ion engine  
[NASA-CASE-NFO-10737] c28 N72-11709
- Radial magnetic field for ion thruster  
[NASA-CASE-LEW-10770-1] c28 N72-22770
- Automatic shunting of ion thruster magnetic field when thruster is not operating  
[NASA-CASE-LEW-10835-1] c28 N72-22771
- Method of making dish ion thruster grids  
[NASA-CASE-LEW-11694-1] c20 N75-18310
- Apparatus for forming dish ion thruster grids  
[NASA-CASE-LEW-11694-2] c37 N76-14461
- Anode for ion thruster  
[NASA-CASE-LEW-12048-1] c20 N77-20162
- Closed loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179
- ION PUMPS**
- Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NFO-13663-1] c35 N77-14406
- ION SOURCES**
- Apertured electrode focusing system for ion sources with nonuniform plasma density  
[NASA-CASE-XNP-03332] c09 N71-10618
- Multilayer porous refractory metal ionizer design with thick, porous, large-grain substrates and thin, porous micron-grain substrates  
[NASA-CASE-XNP-04338] c17 N71-23046
- Development and characteristics of ion thruster accelerator with single glass coated grid to provide increased ion extraction capability and larger diameter accelerator system  
[NASA-CASE-LEW-10106-1] c28 N71-26642
- Low mass ionizing device for use in electric thrust spacecraft engines  
[NASA-CASE-XNP-01954] c28 N71-28850
- Development and characteristics of apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c14 N72-29464
- Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c20 N74-31269
- Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c37 N75-19684
- Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c72 N80-27163
- Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c72 N80-33186
- ION TRAPS (INSTRUMENTATION)**
- Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NFC-13443-1] c76 N76-20994
- IONIC MOBILITY**
- An improved solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c33 N81-16385

## IONIZATION CHAMBERS

Automatic baseline stabilization for ionization detector used in gas chromatograph  
[NASA-CASE-XNP-03128] c10 N70-41991

Electric-rocket engine with electric bombardment ionization chamber  
[NASA-CASE-XNP-04124] c28 N71-21822

Multichannel photoionization chamber for measuring absorption, photoionization yield, and coefficients of gases  
[NASA-CASE-ERC-10044-1] c14 N71-27090

Development and characteristics of apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c14 N72-29464

**IONIZATION GAGES**

Ionization vacuum gage  
[NASA-CASE-XNP-00646] c14 N70-35666

Ionization control system design for monitoring separately located ion gage pressures on vacuum chambers  
[NASA-CASE-XLE-00787] c14 N71-21090

Development and characteristics of apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c14 N72-29464

Ionization gage for measuring ultrahigh vacuum levels  
[NASA-CASE-XLA-05087] c14 N73-30391

**IONIZATION POTENTIALS**

Electrodes having array of small surfaces for field ionization  
[NASA-CASE-ERC-10013] c09 N71-26678

**IONIZED GASES**

Plasma probes having guard ring and primary sensor at same potential to prevent stray wall current collection in ionized gases  
[NASA-CASE-XLE-00690] c25 N69-39884

Transient heat transfer gage for measuring total radiant intensity from far ultraviolet and ionized high temperature gases  
[NASA-CASE-XNP-09802] c33 N71-15641

Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c25 N78-25148

**IONIZERS**

Description of electrical equipment and system for purification of waste water by producing silver ions for bacterial control  
[NASA-CASE-MSC-10960-1] c03 N71-24718

Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c20 N75-18310

**IONIZING RADIATION**

High voltage cable for use in high intensity ionizing radiation fields  
[NASA-CASE-XNP-00738] c09 N70-38201

Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c37 N74-18126

**IONOSPHERE**

Lightweight, rugged, inexpensive satellite battery for producing electrical power from ionosphere using electrodes with different contact potentials  
[NASA-CASE-XGS-01593] c03 N70-35408

**IONS**

Micrometeoroid analyzer using arrays of interconnected capacitors and ion detector  
[NASA-CASE-ARC-10443-1] c14 N73-20477

**IRIDIUM**

Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c35 N79-14346

**IRISES (MECHANICAL APERTURES)**

Waveguide, thin film window and microwave irises  
[NASA-CASE-LAR-10513-1] c07 N72-25170

Development of thin film microwave iris installed in microwave waveguide transverse to flow of energy in waveguide  
[NASA-CASE-LAR-10511-1] c09 N72-29172

**IRON ALLOYS**

Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c26 N78-18182

Process for making a high toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-2] c26 N79-22271

High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c26 N80-32484

**IRON COMPOUNDS**

Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NFO-14272-1] c25 N81-33246

**IRRADIATION**

Solar sensor with coarse and fine sensing elements for matching preirradiated cells on degradation rates  
[NASA-CASE-XLA-01584] c14 N71-23269

Apparatus for obtaining isotropic irradiation on film emulsion from parallel radiation source  
[NASA-CASE-MFS-20095] c24 N72-11595

Production of pure metals  
[NASA-CASE-LEW-10906-1] c25 N74-30502

Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NFO-14350-1] c33 N80-14332

Ultra-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c27 N80-26446

**IRRIGATION**

Solar-powered pump  
[NASA-CASE-NFO-13567-1] c44 N76-29701

**ISOLATORS**

Internal labyrinth and shield structure to improve electrical isolation of propellant feed source from ion thruster  
[NASA-CASE-LEW-10210-1] c28 N71-26781

Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c37 N79-11402

Resonant isolator for maser amplifier  
[NASA-CASE-NFO-15201-1] c36 N81-24426

**ISOPROPYL ALCOHOL**

Preparation of fluorinated polyethers from 2-hydro-perhaloisopropyl alcohols  
[NASA-CASE-MFS-11492] c06 N73-30102

**ISOTHERMAL LAYERS**

Double-wall isothermal cylinder containing heat transfer fluid thermal reservoir as spacecraft insulation cover  
[NASA-CASE-MFS-20355] c33 N71-25353

**ISOTHERMAL PROCESSES**

Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366

**ISOTOPE SEPARATION**

Isotope separation using metallic vapor lasers  
[NASA-CASE-NFO-13550-1] c36 N77-26477

**J**

**JET AIRCRAFT**

Deflector for preventing objects from entering nacelle inlets of jet aircraft  
[NASA-CASE-XLE-00388] c28 N70-34788

**JET AIRCRAFT NOISE**

Upper surface, external flow, jet-augmented flap configuration for high wing jet aircraft for noise reduction  
[NASA-CASE-XLA-00087] c02 N70-33332

Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c07 N74-32418

Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c07 N74-33218

Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c35 N75-19614

Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c07 N76-18117

**JET AMPLIFIERS**

Fluid jet amplifier with fluid from jet nozzle deflected by inlet pressure  
[NASA-CASE-XLF-03512] c12 N69-21466

Fluid control jet amplifiers  
[NASA-CASE-XLF-09341] c12 N71-28741

**JET BLAST EFFECTS**

Separation mechanism for use between stages of multistage rocket vehicles  
[NASA-CASE-XLA-00188] c15 N71-22874

**JET CONTROL**

Attitude control device for space vehicles  
[NASA-CASE-XNP-00294] c21 N70-36938

**JET ENGINES**

Absorptive, nonreflecting barrier mounted



- between closely spaced jet engines on supersonic aircraft, for preventing shock wave interference  
[NASA-CASE-XLA-02865] c28 N71-15563
- Development of thrust dynamometer for measuring performance of jet and rocket engines  
[NASA-CASE-XLE-05260] c14 N71-20429
- Afterburner-equipped jet engine nacelle with slotted configuration afterbody  
[NASA-CASE-XLA-10450] c28 N71-21493
- Process for welding compressor and turbine blades to rotors and discs of jet engines  
[NASA-CASE-LEW-10533-1] c15 N73-28515
- Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c07 N74-31270
- Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c07 N76-18117
- The engine air intake system  
[NASA-CASE-ARC-10761-1] c07 N77-18154
- Stator rotor tools  
[NASA-CASE-MSC-16000-1] c37 N78-24544
- Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c37 N81-33483
- JET EXHAUST**
- Jet exhaust noise suppressor  
[NASA-CASE-LEW-11286-1] c07 N74-27490
- Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089
- Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c07 N80-26298
- JET FLAPS**
- Upper surface, external flow, jet-augmented flap configuration for high wing jet aircraft for noise reduction  
[NASA-CASE-XLA-00087] c02 N70-33332
- JET FLOW**
- Two-phase flow system with discrete, impinging two-phase jets  
[NASA-CASE-NPO-11556] c12 N72-25292
- JET MIXING FLOW**
- Fuel injection system for maximum combustion efficiency of rocket engines  
[NASA-CASE-XLE-00111] c28 N70-38199
- JET NOZZLES**
- Fluid jet amplifier with fluid from jet nozzle deflected by inlet pressure  
[NASA-CASE-XLE-03512] c12 N69-21466
- Thrust and attitude control apparatus using jet nozzle in movable canard surface or fin configuration  
[NASA-CASE-XLE-03583] c31 N71-17629
- Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c35 N74-15093
- JET PROPULSION**
- Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c07 N78-27121
- JET STREAMS (METEOROLOGY)**
- CAT altitude avoidance system  
[NASA-CASE-NFO-15351-1] c47 N81-16677
- JET THRUST**
- System for aerodynamic control of rocket vehicles by secondary injection of fluid into nozzle exhaust stream  
[NASA-CASE-XLA-01163] c21 N71-15582
- Drive mechanism for operating reactance attitude control system for aerospace bodies  
[NASA-CASE-XMF-01598] c21 N71-15583
- Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c07 N80-18039
- JETTISON SYSTEMS**
- Describing assembly for opening stabilizing and decelerating flaps of flight capsules used in space research  
[NASA-CASE-XMF-03169] c31 N71-15675
- System for deploying and ejecting releasable clamshell fairing sections from spinning sounding rockets  
[NASA-CASE-GSC-10590-1] c31 N73-14853
- Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c03 N81-29107
- JIGS**
- Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c37 N76-21554
- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c44 N79-19447
- JOINING**
- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c07 N79-14096
- JOINTS (ANATOMY)**
- Space suit with pressure-volume compensator system  
[NASA-CASE-XLA-05332] c05 N71-11194
- Equipotential space suits utilizing mechanical aids to minimize astronaut energy at bending joints  
[NASA-CASE-LAR-10007-1] c05 N71-11195
- Cord restraint system for pressure suit joints  
[NASA-CASE-XMS-09635] c05 N71-24623
- Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c54 N75-12616
- Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c54 N77-30749
- Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c54 N79-24651
- JOINTS (JUNCTIONS)**
- Hollow spherical electrode for shielding dielectric junction between high voltage conductor and insulator  
[NASA-CASE-XLE-03778] c09 N69-21542
- Elastic universal joint for rocket motor mounting  
[NASA-CASE-XNP-00416] c15 N70-36947
- Portable device for aligning surfaces of two adjacent wall or sheet sections for joining at point of junction  
[NASA-CASE-XMF-01452] c15 N70-41371
- Design and development of flexible joint for pressure suits  
[NASA-CASE-XMS-09636] c05 N71-12344
- Elbow forming in jacketed pipes while maintaining separation between core shape and jacket pipes  
[NASA-CASE-XNP-10475] c15 N71-24679
- Method and apparatus for precision sizing and joining of large diameter tubes by bulging or constricting overlapping ends  
[NASA-CASE-XMF-05114-2] c15 N71-26148
- Universal joints for connecting two displaced shafts or members  
[NASA-CASE-NPO-10646] c15 N71-28467
- Flexible bellows joint shielding sleeve for propellant transfer pipelines  
[NASA-CASE-XNP-01855] c15 N71-28937
- Mechanism for restraining universal joints to prevent separation while allowing bending, angulation, and lateral offset in any position about axis  
[NASA-CASE-XNP-02278] c15 N71-28951
- Diffusion welding in air --- solid state welding of butt joint by fusion welding, surface cleaning, and heating  
[NASA-CASE-LEW-11387-1] c37 N74-18128
- Bonded joint and method --- for reducing peak shear stress in adhesive bonds  
[NASA-CASE-LAR-10900-1] c37 N74-23064
- Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c54 N74-32546
- Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c37 N75-12326
- Latching device  
[NASA-CASE-MFS-21606-1] c37 N75-19685
- Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c37 N75-26372
- Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c37 N76-14460
- Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c54 N78-17676
- Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c54 N78-31735
- Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c37 N80-22704
- Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c54 N80-30043
- Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c37 N81-15363
- Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c33 N81-19394

## JOSEPHSON JUNCTIONS

- Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c33 N75-31332
- Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c33 N81-17348
- JOULE-THOMSON EFFECT**
- Gas balancing, cryogenic refrigeration apparatus with Joule-Thomson valve assembly  
[NASA-CASE-NPO-10309] c15 N69-23190
- A cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c31 N81-19344
- JOURNAL BEARINGS**
- Slit regulated gas journal bearing  
[NASA-CASE-XNP-00476] c15 N70-38620
- Journal air bearing with cylindrical cup designed to ride on shaft  
[NASA-CASE-MFS-20423] c15 N72-11388
- Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c37 N74-21061
- Journal Bearings  
[NASA-CASE-LEW-11076-2] c37 N74-32921
- Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c37 N75-30562
- Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c37 N76-15461
- JUNCTION DIODES**
- Phototransistor with base collector junction diode for integration into photo sensor arrays  
[NASA-CASE-MFS-20407] c09 N73-19235
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c33 N75-25041
- Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c33 N77-21314
- JUNCTION TRANSISTORS**
- Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c09 N69-24318
- Miniature piezofunction semiconductor transducer with in situ stress coupling  
[NASA-CASE-ERC-10087-2] c14 N72-31446
- Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c37 N75-26372

## K

## KEYING

- High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c60 N81-27814

## KIDNEY DISEASES

- Aldehyde-containing urea-adsorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c27 N77-30236

## KINETIC ENERGY

- Non-reusable kinetic energy absorber for application in soft landing of space vehicles  
[NASA-CASE-XLE-00810] c15 N70-34861
- Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c34 N79-20335

## KINETIC FRICTION

- Kinetic and static friction force measurement between magnetic tape and magnetic head surfaces  
[NASA-CASE-XNP-08680] c14 N71-22995

## KINETICS

- Micrometeoroid analyzer using arrays of interconnected capacitors and ion detector  
[NASA-CASE-ARC-10443-1] c14 N73-20477

## KRAFT PROCESS (WOODPULP)

- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c85 N79-17747

## L

## LABORATORY EQUIPMENT

- Design of mechanical device for stirring several test tubes simultaneously  
[NASA-CASE-XAC-06956] c15 N71-24177
- Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove  
[NASA-CASE-XLE-02531] c05 N71-23080
- Apparatus and process for volumetrically dispensing reagent quantities of volatile chemicals for small batch reactions  
[NASA-CASE-NPO-10070] c15 N71-27372

- Development of variable angle device for positioning test tubes to permit optimum drying of culture medium  
[NASA-CASE-LAR-10507-1] c11 N72-25284
- Development of method for controlling vapor content of gas  
[NASA-CASE-NFC-10633] c03 N72-28025
- Apparatus for mixing two or more liquids under zero gravity conditions  
[NASA-CASE-LAR-10195-1] c15 N73-19458
- Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c51 N74-15778
- Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c51 N77-27677
- Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NFO-13731-1] c39 N78-10493
- The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c74 N78-13874
- Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c25 N78-14104
- Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c25 N79-14169
- Electrophoresis device  
[NASA-CASE-MFS-25426-1] c25 N81-29179
- LACQUERS**
- Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c27 N81-25209
- LAMINAR FLOW**
- Laminar flow of liquid coolants in rocket engines  
[NASA-CASE-NFC-10122] c12 N71-17631
- Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c02 N80-20224
- LAMINATES**
- Multilayer porous refractory metal ionizer design with thick, porous, large-grain substrates and thin, porous micron-grain substrates  
[NASA-CASE-XNP-04338] c17 N71-23046
- Development and characteristics of polyimide impregnated laminates with fiberglass cloth backing for application as printed circuit boards  
[NASA-CASE-MFS-20408] c18 N73-12604
- Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c37 N74-18126
- Method of laminating structural members  
[NASA-CASE-XLA-11028-1] c24 N74-27035
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c24 N75-30260
- Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c27 N76-16230
- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c24 N77-19170
- Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c24 N77-27188
- Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c24 N78-15180
- Composite lamination method  
[NASA-CASE-LAR-12019-1] c24 N78-17150
- Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c33 N79-12331
- Method for making patterns for resin matrix composites  
[NASA-CASE-ARC-11246-1] c24 N80-22410
- Process for preparing high temperature polyimide film laminates  
[NASA-CASE-LAR-12742-1] c24 N81-12174
- Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c24 N81-17170
- Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c24 N81-26179
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c24 N81-33235

**LANDFORMS**

Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c43 N81-17499

**LANDING AIDS**

Electro-optical attitude sensing device for landing approach of flight vehicle  
[NASA-CASE-XMS-01994-1] c14 N72-17326  
Magnetic method for detection of aircraft position relative to runway  
[NASA-CASE-ARC-10179-1] c21 N72-22619  
Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c09 N78-18083

**LANDING GEAR**

Pivotal shock absorbing assembly for use as load distributing portion in landing gear systems of space vehicles  
[NASA-CASE-XMF-03856] c31 N70-34159  
Nose gear steering system for vehicles with main skids to provide directional stability after loss of aerodynamic control  
[NASA-CASE-XLA-01804] c02 N70-34160  
Landing pad assembly for aerospace vehicles  
[NASA-CASE-XMF-02853] c31 N70-36654  
Aircraft wheel spray drag alleviator for dual tandem landing gear  
[NASA-CASE-XLA-01583] c02 N70-36825  
Spacecraft shock absorbing system for soft landings  
[NASA-CASE-XMF-02108] c31 N70-36845  
Shock absorber for landing gear of lunar or planetary landing modules  
[NASA-CASE-XMF-01045] c15 N70-40354  
Vertically descending flight vehicle landing gear for rough terrain  
[NASA-CASE-XMF-01174] c02 N70-41589  
Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c37 N81-24443

**LANDING MODULES**

Shock absorber for landing gear of lunar or planetary landing modules  
[NASA-CASE-XMF-01045] c15 N70-40354

**LANDING SIMULATION**

Lunar and planetary gravity simulator to test vehicular response to landing  
[NASA-CASE-XLA-00493] c11 N70-34786

**LANTHANUM COMPOUNDS**

Cesium thermionic converters having improved electrodes  
[NASA-CASE-LEW-12038-3] c44 N78-25555

**LARGE SCALE INTEGRATION**

A general logic structure for custom LSI circuits  
[NASA-CASE-NPO-14410-1] c33 N79-25314  
Tactile sensing system --- manipulator controllers  
[NASA-CASE-NPO-15094-1] c33 N81-16386

**LARGE SPACE STRUCTURES**

Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c33 N81-19394  
Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c31 N81-27323

**LARGE SPACE TELESCOPE**

System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c74 N79-11865

**LASER ALTIMETERS**

Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c36 N81-19439

**LASER APPLICATIONS**

High power laser apparatus and system  
[NASA-CASE-ILE-2529-2] c36 N75-27364  
Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c36 N76-24553  
Wind measurement system  
[NASA-CASE-MFS-23362-1] c47 N77-10753  
Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c36 N77-25501  
Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c36 N77-25502  
Laser extensometer  
[NASA-CASE-MFS-19259-1] c36 N78-14380  
Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by

means of an electric field  
[NASA-CASE-LEW-12465-1] c25 N78-25148  
Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c36 N79-18307  
Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c36 N81-19440

**LASER CAVITIES**

Laser apparatus  
[NASA-CASE-GSC-12237-1] c36 N80-14384

**LASER DOPPLER VELOCIMETERS**

Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c35 N75-16783  
Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c36 N76-14447  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493  
Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c36 N77-25501  
Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c74 N78-17866  
Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c35 N79-14349  
Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c74 N80-12866  
Laser Doppler velocity simulator --- to induce frequency shift  
[NASA-CASE-LAR-12176-1] c36 N80-16321  
Rhomboid prism pair for rotating the plane of parallel light beams --- laser velocimeters  
[NASA-CASE-ARC-11311-1] c74 N81-16882  
Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c36 N81-24422

**LASER DRILLING**

In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c43 N78-14452

**LASER FUSION**

Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190

**LASER GUIDANCE**

Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c74 N80-12866

**LASER GYROSCOPES**

Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c35 N81-33448

**LASER HEATING**

Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c36 N75-30524  
Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c71 N81-15767

**LASER INTERFEROMETRY**

Dual-beam skin friction interferometer --- portable equipment  
[NASA-CASE-ARC-11354-1] c36 N81-29415

**LASER MATERIALS**

Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c36 N75-19655

**LASER MODE LOCKING**

Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c36 N75-19653  
Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c36 N75-19654  
Length controlled stabilized mode-lock Nd:YAG laser  
[NASA-CASE-GSC-11571-1] c36 N77-25499

**LASER MODES**

Xenon flashlamp driver system for optical laser pumping  
[NASA-CASE-ERC-10283] c16 N72-25485  
Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c36 N75-31427

**LASER OUTPUTS**

Method and apparatus using temperature control for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c16 N69-31343  
Describing laser Doppler velocimeter for measuring mean velocity and turbulence of

fluid flow  
[NASA-CASE-MFS-20386] c21 N71-19212  
Development of apparatus for amplitude modulation of diode laser by periodic discharge of direct current power supply  
[NASA-CASE-XMS-04269] c16 N71-22895  
Doppler shifted laser beam as fluid velocity sensor  
[NASA-CASE-XAC-10770-1] c16 N71-24828  
Calibrator for measuring and modulating or demodulating laser outputs  
[NASA-CASE-XLA-03410] c16 N71-25914  
Method and apparatus for optically modulating light or microwave beam  
[NASA-CASE-GSC-10216-1] c23 N71-26722  
Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications  
[NASA-CASE-HQN-10541-2] c15 N71-27135  
Optical communication system with gas filled waveguide for laser beam transmission  
[NASA-CASE-HQN-10541-4] c16 N71-27183  
Design and development of multichannel laser remote control system using modulated helium-neon laser as transmitter and light collector as receiving antenna  
[NASA-CASE-LAR-10311-1] c16 N73-16536  
Performance of ac power supply developed for CO<sub>2</sub> laser system  
[NASA-CASE-GSC-11222-1] c16 N73-32391  
Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c36 N74-13205  
Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c36 N74-20009  
Optically detonated explosive device  
[NASA-CASE-NFO-11743-1] c28 N74-27425  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c36 N75-15028  
Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c36 N75-19654  
Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c36 N75-19655  
Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c36 N75-31427  
Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-MSC-12640-1] c74 N76-31998  
Length controlled stabilized mode-lock Nd:YAG laser  
[NASA-CASE-GSC-11571-1] c36 N77-25499  
Apparatus for photon excited catalysis  
[NASA-CASE-NFO-13566-1] c25 N77-32255  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c32 N80-24510  
Collimated beam manifold and method for using the same --- laser beams  
[NASA-CASE-MFS-25312-1] c74 N80-34251  
Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c35 N81-27459

**LASER PLASMAS**  
Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c36 N77-19416

**LASER PUMPING**  
Laser apparatus  
[NASA-CASE-GSC-12237-1] c36 N80-14384  
Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c36 N82-13415

**LASER RANGER/TRACKER**  
Laser beam projector for continuous, precise alignment between target, laser generator, and astronomical telescope during tracking  
[NASA-CASE-NPO-11087] c23 N71-29125

**LASER SPECTROSCOPY**  
Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c25 N81-25159

**LASER WINDOWS**  
Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c74 N78-17866

## LASERS

Laser device for removing material from rotating object for dynamic balancing  
[NASA-CASE-MFS-11279] c16 N71-20400  
Design and development of optical interferometer with laser light source for application to schlieren systems  
[NASA-CASE-XLA-04295] c16 N71-24170  
Self-generating optical frequency waveguide  
[NASA-CASE-HQN-10541-1] c07 N71-26291  
Design and characteristics of laser camera system with diffusion filter of small particles with average diameter larger than wavelength of laser light  
[NASA-CASE-NEC-10417] c16 N71-33410  
Optical sensing of supersonic flows by correlating deflections in laser beams through flow  
[NASA-CASE-MFS-20642] c14 N72-21407  
Laser technique for breaking ice in ship path  
[NASA-CASE-LAR-10815-1] c16 N72-22520  
Design of precision vertical alignment system using laser with gravitationally sensitive cavity  
[NASA-CASE-ABC-10444-1] c16 N73-33397  
Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c36 N74-11313  
Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NFO-11856-1] c36 N74-15145  
Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c36 N74-21091  
Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c36 N75-19652  
Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c36 N75-19653  
Acoustically controlled distributed feedback laser  
[NASA-CASE-NFO-13175-1] c36 N75-31427  
Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NFO-13346-1] c36 N76-29575  
Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c74 N76-30053  
Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942  
Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c32 N77-28346  
Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c73 N78-32848  
Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c37 N79-28549  
Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c36 N81-12407

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Bolt-latch mechanism for releasing despin weights from space vehicle  
[NASA-CASE-XLA-00679] c15 N70-38601  
Transparent polycarbonate resin, shell helmet and latch design for high altitude and space flight  
[NASA-CASE-XMS-04935] c05 N71-11190  
Quick disconnect latch and handle combination for mounting articles on walls or supporting bases in spacecraft under zero gravity conditions  
[NASA-CASE-MFS-11132] c15 N71-17649  
Design, development, and characteristics of latching mechanism for operation in limited access areas  
[NASA-CASE-XMS-03745] c15 N71-21076  
Latching mechanism with pivoting catch and self-contained spring ejector  
[NASA-CASE-XLA-03538] c15 N71-24897  
Latch for fastening spacecraft docking rings  
[NASA-CASE-MSC-15474-1] c15 N71-26162  
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Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c54 N78-17678

- Low temperature latching solenoid  
[NASA-CASE-MSC-18106-1] c33 N82-11357
- LATERAL CONTROL**  
Three-axis controller operated by hand-wrist motion for yaw, pitch, and roll control  
[NASA-CASE-XAC-01404] c05 N70-41581  
Star sensor system for roll attitude control of spacecraft  
[NASA-CASE-XNP-01307] c21 N70-41856  
Supersonic or hypersonic vehicle control system comprising elevons with hinge line sweep and free of adverse aerodynamic cross coupling  
[NASA-CASE-XLA-08967] c02 N71-27088  
Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c08 N79-14108  
Propulsive lateral control nozzle  
[NASA-CASE-LAR-12136-1] c08 N81-33210
- LATERAL STABILITY**  
An annular wing  
[NASA-CASE-FRC-11007-2] c02 N79-24959
- LATEX**  
Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c27 N81-17261  
Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c25 N81-19242
- LATHES**  
Rotary spindle lathe attachments for machining geometrical cones  
[NASA-CASE-XMS-04292] c15 N71-22722  
Lathe tool and holder combination for machining resin impregnated fiberglass cloth laminates  
[NASA-CASE-XLA-10470] c15 N72-21489
- LAUNCH ESCAPE SYSTEMS**  
Emergency escape cabin system for launch towers  
[NASA-CASE-XKS-02342] c05 N71-11199  
Ejector for separating astronaut from ejection seat during prelaunch or initial launch phase of flight  
[NASA-CASE-XMS-04625] c05 N71-20718
- LAUNCH VEHICLE CONFIGURATIONS**  
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[NASA-CASE-ARC-10979-1] c09 N77-19076
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[NASA-CASE-XLA-02704] c11 N69-21540  
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[NASA-CASE-XMF-02307] c14 N71-10779
- LAUNCHING PADS**  
Launch pad missile release system with bending moment change rate reduction in thrust distribution structure at liftoff  
[NASA-CASE-XMF-03198] c30 N70-40353  
Remotely actuated quick disconnect for tubular umbilical conduits used to transfer fluids from ground to rocket vehicle  
[NASA-CASE-XLA-01396] c03 N71-12259  
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[NASA-CASE-XKS-10543] c07 N71-26292
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[NASA-CASE-LAR-12065-2] c24 N81-33235
- LAYERS**  
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[NASA-CASE-LEW-12081-1] c28 N78-24365
- LEACHING**  
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[NASA-CASE-NPO-14109-1] c28 N80-23471
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[NASA-CASE-MFS-23059-1] c44 N76-27664  
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[NASA-CASE-LEW-13148-2] c44 N81-29524
- LEAD TELLURIDES**  
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[NASA-CASE-XGS-04554] c15 N69-39786
- Procedure for segmenting lead telluride and silicon germanium thermoelectric elements to obtain composite elements effective over wide temperature range  
[NASA-CASE-XGS-05718] c26 N71-16037
- LEADING EDGE FLAPS**  
Leading edge vortex flaps for drag reduction --- during subsonic flight  
[NASA-CASE-LAR-12750-1] c02 N81-19016
- LEADING EDGES**  
Leading edge design for hypersonic reentry vehicles  
[NASA-CASE-XLA-00165] c31 N70-33242  
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[NASA-CASE-XLA-01486] c01 N71-23497  
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[NASA-CASE-LEW-12550-1] c24 N77-19170
- LEAKAGE**  
Rocket chamber leak test fixture using tubular plug  
[NASA-CASE-XFR-09479] c14 N69-27503  
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[NASA-CASE-XMF-02307] c14 N71-10779  
Fluid leakage detection system with automatic monitoring capability  
[NASA-CASE-LAR-10323-1] c12 N71-17573  
Space suit using nonflexible material with low leakage and providing protection against thermal extremes, physical punctures, and radiation with high mobility articulation  
[NASA-CASE-XAC-07043] c05 N71-23161  
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[NASA-CASE-XMF-02392] c32 N71-24285  
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[NASA-CASE-ERC-10034] c15 N71-24896  
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[NASA-CASE-ERC-10045] c15 N71-24910  
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[NASA-CASE-ERC-10150] c14 N71-28992  
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[NASA-CASE-MFS-21761-1] c35 N75-15931  
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[NASA-CASE-XLF-02367-1] c31 N79-21225
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[NASA-CASE-MFS-23225-1] c52 N77-14735  
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[NASA-CASE-LAR-12251-1] c74 N79-14892
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[NASA-CASE-XNP-04111] c14 N71-15622  
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[NASA-CASE-XMF-03844-1] c14 N71-26474  
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[NASA-CASE-GSC-10700] c23 N71-30027  
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[NASA-CASE-GSC-11133-1] c23 N72-11568  
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[NASA-CASE-ARC-11039-1] c74 N78-32854  
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[NASA-CASE-XGS-00260] c31 N70-37924
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[NASA-CASE-XLE-00454] c23 N71-17802  
Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c37 N78-27425
- LEVEL (QUANTITY)**  
Gauge for measuring quantity of liquid in spherical tank in reduced gravity  
[NASA-CASE-XMS-06236] c14 N71-21067  
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[NASA-CASE-XMF-14301] c09 N71-23188
- LEVELING**  
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[NASA-CASE-XLA-07911] c15 N71-15571  
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[NASA-CASE-NPO-10037] c09 N71-19610  
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[NASA-CASE-NPO-10721] c15 N72-27484  
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[NASA-CASE-MFS-22039-1] c09 N75-12968
- LEVITATION**  
Containerless melting and rapid solidification apparatus and method  
[NASA-CASE-MFS-25305-1] c35 N81-16427  
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[NASA-CASE-MFS-25509-1] c34 N82-10359
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Hollow rolling element bearings  
[NASA-CASE-LEW-11087-3] c37 N74-21064
- LIFE DETECTORS**  
Use of enzyme hexokinase and glucose to reduce inherent light levels of ATP in luciferase compositions  
[NASA-CASE-XGS-05533] c04 N69-27487  
Describing method for lyophilization of luciferase containing mixtures for use in life detection reactions  
[NASA-CASE-XGS-05532] c06 N71-17705
- LIFE RAFTS**  
Design of inflatable life raft for aircrafts and boats  
[NASA-CASE-XMS-00863] c05 N70-34857  
Inflatable stabilizing system for use on life raft to reduce rocking and preclude capsizing  
[NASA-CASE-XSC-12393-1] c02 N73-26006  
Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c54 N74-14845
- LIFE SUPPORT SYSTEMS**  
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[NASA-CASE-XMS-01240] c05 N70-35152  
Portable environmental control and life support system for astronaut in and out of spacecraft  
[NASA-CASE-XMS-05632-1] c05 N71-11203  
Design and development of flexible tunnel for use by spacecrews in performing extravehicular activities  
[NASA-CASE-MSC-12245-1] c05 N71-24728  
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[NASA-CASE-XMS-09637-1] c05 N71-24730
- Development and characteristics of inflatable structure to provide escape from orbit for spacecrews under emergency conditions  
[NASA-CASE-XMS-06162] c31 N71-28851  
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[NASA-CASE-XLA-08913] c14 N71-28933  
Open loop life support subsystem using breathing bag as reservoir for EVA  
[NASA-CASE-MSC-12411-1] c05 N72-20096  
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[NASA-CASE-XLA-8914] c15 N73-12492  
Intra- and extravehicular life support space suite for Apollo astronauts  
[NASA-CASE-MSC-12609-1] c05 N73-32012  
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[NASA-CASE-LAR-10551-1] c25 N74-12813  
Helmet feedport  
[NASA-CASE-XMS-09653] c54 N78-17680  
Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721  
Improved low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c85 N80-33312
- LIFT DEVICES**  
Device for handling heavy loads by distributing forces  
[NASA-CASE-XNP-04969] c11 N69-27466  
Techniques for recovery of multistage rocket vehicles by providing lifting surfaces on individual sections  
[NASA-CASE-XMF-00389] c31 N70-34176  
Direct lift control system having flaps with slots adjacent to their leading edge and particularly adapted for lightweight aircraft  
[NASA-CASE-LAR-10249-1] c02 N71-26110  
Development of auxiliary lifting system to provide ferry capability for entry vehicles  
[NASA-CASE-LAR-10574-1] c11 N73-13257  
High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c05 N75-25914  
Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c20 N76-22296  
Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c08 N79-14108
- LIFT DRAG RATIO**  
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[NASA-CASE-XLA-04901] c31 N71-24315  
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[NASA-CASE-FRC-11007-2] c02 N75-24959
- LIFTING BODIES**  
Techniques for recovery of multistage rocket vehicles by providing lifting surfaces on individual sections  
[NASA-CASE-XMF-00389] c31 N70-34176  
Graphic illustration of lifting body design  
[NASA-CASE-FRC-10063] c01 N71-12217  
Static force balancing system attached to lifting body  
[NASA-CASE-LAR-10348-1] c11 N73-12264
- LIFTING REENTRY VEHICLES**  
Lenticular vehicle with foldable aerodynamic control flaps and reaction jets for operation above and within earth's atmosphere  
[NASA-CASE-XGS-00260] c31 N70-37924  
Variable geometry manned orbital vehicle having high aerodynamic efficiency over wide speed range and incorporating auxiliary pivotal wings  
[NASA-CASE-XLA-03691] c31 N71-15674  
Designing spacecraft for flight into space, atmospheric reentry, and landing at selected sites  
[NASA-CASE-XAC-02058] c02 N71-16087
- LIGHT (VISIBLE RADIATION)**  
Light baffle with oblate hemispheroid surface and shading flange  
[NASA-CASE-NFO-10337] c14 N71-15604  
Maksutov spectrograph for low light level research  
[NASA-CASE-XLA-10402] c14 N71-29041

- Device for detection of combustion light preceding gaseous explosions  
[NASA-CASE-LAR-10739-1] c14 N73-16484
- LIGHT AIRCRAFT**  
Direct lift control system having flaps with slots adjacent to their leading edge and particularly adapted for lightweight aircraft  
[NASA-CASE-LAR-10249-1] c02 N71-26110
- LIGHT AMPLIFIERS**  
High power metallic halide laser  
[NASA-CASE-NPO-14782-1] c36 N80-18381
- LIGHT BEAMS**  
Cylindrical reflector for resolving wide angle light beam from telescope into narrow beam for spectroscopic analysis  
[NASA-CASE-XGS-08269] c23 N71-26206  
Development and characteristics of optical communications system based on modulation of light beams  
[NASA-CASE-XLA-01090] c16 N71-28963  
Multiple pattern holographic information storage and readout system  
[NASA-CASE-ERC-10151] c16 N71-29131  
Rhomboid prism pair for rotating the plane of parallel light beams --- laser velocimeters  
[NASA-CASE-ARC-11311-1] c74 N81-16882
- LIGHT GAS GUNS**  
Implosion driven, light gas, hypervelocity gun  
[NASA-CASE-XAC-05902] c11 N71-18578
- LIGHT MODULATION**  
Optical retrodirective modulator with focus spoiling reflector driven by modulation signal  
[NASA-CASE-GSC-10062] c14 N71-15605  
Modulating and controlling intensity of light beam from high temperature source by servocontrolled rotating cylinders  
[NASA-CASE-XMS-04300] c09 N71-19479  
Method and apparatus for optically modulating light or microwave beam  
[NASA-CASE-GSC-10216-1] c23 N71-26722  
Development and characteristics of optical communications system based on modulation of light beams  
[NASA-CASE-XLA-01090] c16 N71-28963  
Lamp modulator for generating visual indication of presence and magnitude of signal  
[NASA-CASE-KSC-10565] c09 N72-25250  
Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c74 N76-30053  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c32 N80-24510  
Collimated beam manifold and method for using the same --- laser beams  
[NASA-CASE-MFS-25312-1] c74 N80-34251  
Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c74 N81-24900
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The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c74 N78-13874
- LIGHT SCATTERING METERS**  
System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c74 N79-11865
- LIGHT SOURCES**  
Light radiation direction indicator with baffle of two parallel grids  
[NASA-CASE-XNP-03930] c14 N69-24331  
High intensity heat and light unit containing quartz lamp elements protectively positioned to withstand severe environmental stress  
[NASA-CASE-XLA-00141] c09 N70-33312  
Photosensitive light source device for detecting unmanned spacecraft deviation from reference attitude  
[NASA-CASE-XNP-00438] c21 N70-35089  
Electro-optical detector for determining position of light source  
[NASA-CASE-XNP-01059] c23 N71-21821  
Optical system for selecting particular wavelength light beams from multiple wavelength light source  
[NASA-CASE-ERC-10248] c14 N72-17323  
Electro-optical stabilization of calibrated light source  
[NASA-CASE-MSC-12293-1] c14 N72-27411
- Development of temperature compensated light source with components and circuitry for maintaining luminous intensity independent of temperature variations  
[NASA-CASE-ARC-10467-1] c09 N73-14214  
Interferometer prism and control system for precisely determining direction to remote light source  
[NASA-CASE-ARC-10278-1] c14 N73-25463  
Attitude sensor  
[NASA-CASE-LAR-10586-1] c19 N74-15089  
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[NASA-CASE-XNP-01296] c33 N75-27250  
Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c33 N75-29318  
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[NASA-CASE-NFO-11429-1] c74 N77-21941
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[NASA-CASE-MFS-20074] c16 N71-15565  
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[NASA-CASE-XNP-08840] c23 N71-16365  
Optical monitor panel consisting of translucent screen with test or meter information projected onto it from rear for application in control rooms of missile launching and tracking stations  
[NASA-CASE-XK3-03509] c14 N71-23175  
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[NASA-CASE-NFO-10747] c03 N72-22042  
Method and system for transmitting and distributing optical frequency radiation  
[NASA-CASE-HCN-10541-3] c23 N72-23695  
Thin absorbing metallic film for increased visible light transmission  
[NASA-CASE-LAR-10836-1] c26 N72-27784  
Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c70 N74-13436  
Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c74 N77-22950  
Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c74 N78-15879
- LIGHTING EQUIPMENT**  
Sealed fluorescent tube light unit capable of connection with other units to form string of work lights  
[NASA-CASE-XKS-05932] c09 N71-26787  
Pressurized inert gas feed for lighting system  
[NASA-CASE-KSC-10644] c09 N72-27227  
Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315
- LIGHTNING**  
Apparatus for determining distance to lightning strokes from single station by magnetic and electric field sensing antennas  
[NASA-CASE-KSC-10698] c07 N73-20175  
System for locating lightning strokes by coordination of directional antenna signals  
[NASA-CASE-KSC-10729-1] c09 N73-32110  
Monitoring and recording lightning strokes in predetermined area  
[NASA-CASE-KSC-10728-1] c14 N73-32319  
Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c33 N75-26246  
Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c33 N79-10337  
Lightning current detector  
[NASA-CASE-KSC-11057-1] c33 N79-14305
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[NASA-CASE-KSC-11069-1] c52 N79-26772  
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[NASA-CASE-MSC-18759-1] c52 N81-24716
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Variable duration pulse integrator design for integrating pulse duration modulated pulses with elimination of ripple content  
[NASA-CASE-XLA-01219] c10 N71-23084  
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# LINE SPECTRA

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**LINE SPECTRA**  
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[NASA-CASE-NPO-14143-1] c25 N81-14015

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[NASA-CASE-XGS-05441] c10 N71-22962

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[NASA-CASE-NPO-13691-1] c43 N79-17288

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[NASA-CASE-NPO-10351] c08 N71-12503  
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[NASA-CASE-NPO-11868] c10 N73-20254

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Semilinear bearing comprising two rows of roller bearings separated by spherical bearings and permitting rotational and translational movement  
[NASA-CASE-XLA-02809] c15 N71-22982  
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Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c33 N81-22279

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[NASA-CASE-XMS-05700] c15 N69-24266  
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[NASA-CASE-XLE-00037] c28 N70-33372  
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[NASA-CASE-XNP-01951] c09 N70-41929  
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[NASA-CASE-NPO-10122] c12 N71-17631  
Space suit body heat exchanger design composed of thermal conductance yarn and liquid coolant loops  
[NASA-CASE-XMS-05571] c05 N71-19439  
Electric power system with circulatory liquid coolant cooling system  
[NASA-CASE-MFS-14114-2] c09 N71-24807  
Electric power system with thermionic diodes and circulatory liquid metal coolant lines  
[NASA-CASE-MFS-14114] c33 N71-27862  
Apparatus for liquid spray cooling of turbine blades  
[NASA-CASE-XLE-00027] c33 N71-29152

Automatic control device for regulating inlet water temperature of liquid cooled spacesuit  
[NASA-CASE-MSC-13917-1] c05 N72-15098

Automatic temperature control for liquid cooled space suit  
[NASA-CASE-ARC-10599-1] c05 N73-26071  
Heat exchanger system and method  
[NASA-CASE-LAR-10799-2] c34 N76-17317  
Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c52 N77-14736  
Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c31 N78-17237

**LIQUID CRYSTALS**  
Development of combined velocimeter and accelerometer based on color changes in liquid crystalline material subjected to shear stresses  
[NASA-CASE-ERC-10292] c14 N72-25410  
Input signal measurement using liquid crystalline elements  
[NASA-CASE-ERC-10275] c26 N72-25680

**LIQUID FILLED SHELLS**  
Liquid rocket systems for propulsion and control of spacecraft  
[NASA-CASE-XNF-00610] c28 N70-36910  
Design and development of fluid sample collector  
[NASA-CASE-XMS-06767-1] c14 N71-20435  
Manufacture of fluid containers from fused coated polyester sheets having resealable septum  
[NASA-CASE-NPO-10123] c15 N71-24835  
Omnidirectional liquid filled accelerometer design with liquid and housing temperature compensation  
[NASA-CASE-HQN-10780] c14 N71-30265

**LIQUID FLOW**  
Reduced gravity liquid configuration simulator to study propellant behavior in rocket fuel tanks  
[NASA-CASE-XLE-02624] c12 N69-39988  
Liquid junction for glass electrode or pH meters  
[NASA-CASE-NPO-10682] c15 N70-34699  
Actuator using compressed gas as driving force to control valve handling large liquid flows  
[NASA-CASE-XHQ-01208] c15 N70-35409  
Two component valve assembly for cryogenic liquid transfer regulation  
[NASA-CASE-XLE-00397] c15 N70-36492  
Positive displacement flowmeter for measuring extremely low flows of fluid with self calibrating features  
[NASA-CASE-XMF-02822] c14 N70-41994  
High pressure liquid flow sight assembly for wide temperature range applications including cryogenic fluids  
[NASA-CASE-XLE-02998] c14 N70-42074  
Carrier liquid system containing bodies of ablative material  
[NASA-CASE-LEW-10359-2] c33 N73-25952  
Zero gravity liquid transfer device, using spiral shaped screen  
[NASA-CASE-KSC-10626] c14 N73-27378  
System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c34 N76-27517  
Directional flow sensor  
[NASA-CASE-FRC-11074-1] c35 N82-11436

**LIQUID HELIUM**  
Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c20 N75-24837  
Helium refrigerator  
[NASA-CASE-NPO-13435-1] c31 N76-14284  
Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c31 N77-10229  
Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c31 N78-25256  
Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c72 N79-13826  
Low cost cryostat  
[NASA-CASE-NPO-14513-1] c35 N81-14287

**LIQUID HYDROGEN**  
Development of thermal insulation material for insulating liquid hydrogen tanks in spacecraft  
[NASA-CASE-XMF-05046] c33 N71-28892  
Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing

- radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c37 N74-18126
- LIQUID INJECTION**  
Thrust vector control by secondary injection of fluid into rocket nozzle flow field to separate exhaust flow  
[NASA-CASE-XLE-00208] c28 N70-34294  
System for aerodynamic control of rocket vehicles by secondary injection of fluid into nozzle exhaust stream  
[NASA-CASE-XLA-01163] c21 N71-15582  
Propellant injection assembly having individually removable and replaceable nozzles for liquid fueled rocket engines  
[NASA-CASE-XMF-00968] c28 N71-15660  
Sodium storage and injection system  
[NASA-CASE-NFO-14384-1] c37 N80-10494  
Method of producing siliccn --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c31 N80-18231
- LIQUID LASERS**  
Method and apparatus using temperature control for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c16 N69-31343
- LIQUID LEVELS**  
Inductive liquid level detection system  
[NASA-CASE-XLE-01609] c14 N71-10500  
Apparatus for fiber optic liquid level sensing  
[NASA-CASE-MSC-1E674-1] c74 N81-24907
- LIQUID METALS**  
Magnetohydrodynamic generator for mixing nonconductive gas and liquid metal mist to form slugs  
[NASA-CASE-XLE-02083] c03 N69-39983  
Thermoelectric power conversion by liquid metal flowing through magnetic field  
[NASA-CASE-XNP-00644] c03 N70-36803  
Analytical test apparatus and method for determining oxygen content in alkali liquid metal  
[NASA-CASE-XLE-01997] c06 N71-23527  
Electric power system with thermionic diodes and circulatory liquid metal coolant lines  
[NASA-CASE-MFS-14114] c33 N71-27862  
Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747  
Shell-side liquid metal boiler employing tube and shell heat exchanger  
[NASA-CASE-NPO-10831] c33 N72-20915  
U shaped heated tube for distillation and purification of liquid metals  
[NASA-CASE-XNP-08124-2] c06 N73-13129  
Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c35 N74-21018  
Process for preparing liquid metal electrical contact device  
[NASA-CASE-LEW-11978-1] c33 N77-26385  
Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c44 N81-32609
- LIQUID NITROGEN**  
Transferring liquid nitrogen through vacuum chamber to cryopanel  
[NASA-CASE-LAR-10031] c15 N72-22484
- LIQUID OXYGEN**  
Dye penetrant and technique for nondestructive tests of solid surfaces contacted by liquid oxygen  
[NASA-CASE-XMF-02221] c18 N71-27170
- LIQUID PHASES**  
Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment  
[NASA-CASE-XLE-01182] c27 N71-15635  
Hydraulic apparatus for casting and molding of liquid polymers  
[NASA-CASE-XNP-07659] c06 N71-22975  
Mixed liquid and vapor phase analyzer design with thermocouples for relative heat transfer measurement  
[NASA-CASE-NFO-10691] c14 N71-26199  
Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c35 N77-21393
- LIQUID PROPELLANT ROCKET ENGINES**  
High thrust annular liquid propellant rocket engine and exhaust nozzle design  
[NASA-CASE-XLE-00078] c28 N70-33284  
Attitude and propellant flow control system for liquid propellant rocket vehicles  
[NASA-CASE-XMF-00185] c21 N70-34539  
Injector manifold assembly for bipropellant rocket engines providing for fuel propellant to serve as coolant  
[NASA-CASE-XMF-00148] c28 N70-38710  
Collapsible auxiliary tank for restarting liquid propellant rocket motors under zero gravity  
[NASA-CASE-XNP-01390] c28 N70-41275  
Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c20 N74-13502  
Space vehicle  
[NASA-CASE-MFS-22734-1] c18 N75-19329  
Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMF-05964-1] c20 N79-21124  
Rocket injector head  
[NASA-CASE-XMF-04592-1] c20 N79-21125
- LIQUID ROCKET PROPELLANTS**  
Propellant injectors for rocket combustion chambers  
[NASA-CASE-XLE-00103] c28 N70-33241  
Liquid rocket systems for propulsion and control of spacecraft  
[NASA-CASE-XNP-00610] c28 N70-36910  
Igniter capsule for chemical ignition of liquid rocket propellants  
[NASA-CASE-XLE-00323] c28 N70-38505  
High temperature spark plug for igniting liquid rocket propellants  
[NASA-CASE-XLE-00660] c28 N70-39925  
Compact high pressure filter for rocket fuel lines  
[NASA-CASE-XNP-00732] c28 N70-41447  
Venting device for liquid propellant storage tank using magnetic field to separate liquid and gaseous phases  
[NASA-CASE-XLE-01449] c15 N70-41646  
Liquid propellant tank design with semitoroidal bulkhead  
[NASA-CASE-XMF-01899] c31 N70-41948  
Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment  
[NASA-CASE-XLE-01182] c27 N71-15635  
Control valve and coaxial variable injector for controlling bipropellant mixture ratio and flow  
[NASA-CASE-XNP-09702] c15 N71-17654  
Slosh and swirl alleviator for liquid propellant tanks during transport and flight  
[NASA-CASE-XLA-05749] c15 N71-19569  
Filler valve design for supplying liquid propellants at high pressure to space vehicles  
[NASA-CASE-XNP-01747] c15 N71-23024  
Electronic recording system for spatial mass distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NPO-10185] c10 N71-26339  
Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747  
Response analyzing apparatus for liquid vapor interface sensor of sloshing rocket propellant  
[NASA-CASE-MFS-11204] c14 N71-29134  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c20 N80-10278  
Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c20 N80-14188
- LIQUID SLOSHING**  
Slosh damping method for liquid rocket propellant tanks  
[NASA-CASE-XMF-00658] c12 N70-38997  
Flexible ring slosh damping baffle for spacecraft fuel tank  
[NASA-CASE-LAR-10317-1] c32 N71-16103  
Submerged fuel tank baffles to prevent sloshing in liquid propellant rocket flight  
[NASA-CASE-XLA-04605] c32 N71-16106  
Hot-wire liquid level detector for cryogenic propellants  
[NASA-CASE-XLE-00454] c23 N71-17802  
Slosh and swirl alleviator for liquid propellant tanks during transport and flight  
[NASA-CASE-XLA-05749] c15 N71-19569

- Pressure sensor network for measuring liquid dynamic response in flight including fuel tank acceleration, liquid slosh amplitude, and fuel depth monitoring  
[NASA-CASE-XLA-05541] c12 N71-26387
- LIQUID SODIUM**  
Sodium storage and injection system  
[NASA-CASE-NFO-14384-1] c37 N80-10494
- LIQUID-GAS MIXTURES**  
Liquid-gas separator adapted for use in zero gravity environment - drawings  
[NASA-CASE-XMS-01624] c15 N70-40062  
Absorbent apparatus for separating gas from liquid-gas stream used in environmental control under zero gravity conditions  
[NASA-CASE-XMS-01492] c05 N70-41297  
Venting device for liquid propellant storage tank using magnetic field to separate liquid and gaseous phases  
[NASA-CASE-XLI-01449] c15 N70-41646  
Liquid-gaseous centrifugal separator for weightlessness environment  
[NASA-CASE-XLA-00415] c15 N71-16079  
Vapor-liquid separator design with vapor driven pump for separated liquid pumping for application in propellant transfer  
[NASA-CASE-XMF-04042] c15 N71-23023
- LIQUID-VAPOR INTERFACES**  
Describing apparatus for separating gas from cryogenic liquid under zero gravity and for venting gas from fuel tank  
[NASA-CASE-XLE-00586] c15 N71-15968  
Liquid-vapor interface seal design for turbine rotating shafts including helical and molecular pumps and liquid cooling of mercury vapor  
[NASA-CASE-XNP-02862-1] c15 N71-26294  
Response analyzing apparatus for liquid vapor interface sensor of slcshing rocket propellant  
[NASA-CASE-MFS-11204] c14 N71-29134
- LIQUIDS**  
Liquid-gas separator adapted for use in zero gravity environment - drawings  
[NASA-CASE-XMS-01624] c15 N70-40062  
Electrical switching device comprising conductive liquid confined within square loop of deformable nonconductive tubing also used for leveling  
[NASA-CASE-NFO-10037] c09 N71-19610  
Purification apparatus for vaporization and fractional distillation of liquids  
[NASA-CASE-XNP-08124] c15 N71-27184  
Quantitative liquid measurements in container by resonant frequencies  
[NASA-CASE-XNP-02500] c18 N71-27397  
Resonant infrasonic gauging device for measuring liquid quantity in closed bladderless reservoir  
[NASA-CASE-MSC-11847-1] c14 N72-11363  
Ablative system with liquid carrying ablative material bodies and forming self-replacing ablative surface  
[NASA-CASE-LEW-10359] c33 N72-25911  
Pressurized tank for feeding liquid waste into processing equipment  
[NASA-CASE-LAR-10365-1] c05 N72-27102  
Apparatus for mixing two or more liquids under zero gravity conditions  
[NASA-CASE-LAR-10195-1] c15 N73-19458  
Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c35 N74-15126  
Method and device for detection of surface discontinuities or defects  
[NASA-CASE-MSC-14187-1] c35 N74-32879  
Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c35 N75-19611  
Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-22167-1] c44 N76-31667  
Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c35 N76-12390  
Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c35 N78-19466  
Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c35 N80-18363  
System for monitoring physical characteristics of fluids --- acoustic techniques
- [NASA-CASE-NFO-15400-1] c34 N81-24384
- LITHIUM COMPOUNDS**  
Utilization of lithium p-lithiophenoxide to prepare star polymers  
[NASA-CASE-NFO-10998-1] c06 N73-32029
- LOAD DISTRIBUTION (FORCES)**  
Force measuring instrument for structural members, particularly fastening bolts or studs  
[NASA-CASE-XMF-00456] c14 N70-34705  
Multiple Belleville spring assembly with even load distribution  
[NASA-CASE-XNF-00840] c15 N70-38225  
Device for use in loading tension members --- characterized by elongated elastic body  
[NASA-CASE-MFS-21488-1] c14 N75-24794  
Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c37 N75-32465
- LOAD TESTING MACHINES**  
Load cell protection device using spring-loaded breakaway mechanism  
[NASA-CASE-XMS-06782] c32 N71-15974  
Development of device for transferring load from load cell to bypass mechanism  
[NASA-CASE-XMS-06329-1] c15 N71-20441  
Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c35 N76-18400  
Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c39 N79-22537
- LOAD TESTS**  
Differential pressure cell insensitive to changes in ambient temperature and extreme overload  
[NASA-CASE-XAC-00042] c14 N70-34816
- LOADING OPERATIONS**  
Air bearings for near frictionless transfer of loads from one body to another  
[NASA-CASE-XMF-01887] c15 N71-10617
- LOADS (FORCES)**  
Device for handling heavy loads by distributing forces  
[NASA-CASE-XNP-04969] c11 N69-27466  
Two plane balance for simultaneous measurements of multiple forces  
[NASA-CASE-XAC-00073] c14 N70-34813  
Improving load capacity and fatigue life of rolling element systems in rockets and missiles  
[NASA-CASE-XLE-02999] c15 N71-16052  
Development of device for transferring load from load cell to bypass mechanism  
[NASA-CASE-XMS-06329-1] c15 N71-20441  
Valve assembly for controlling simultaneously more than one fluid flow, and having stable qualities under loads  
[NASA-CASE-XMS-05890] c09 N71-23191  
Solid state force measuring electromechanical transducers made of piezoresistive materials  
[NASA-CASE-ERC-10088] c26 N71-25490  
Turn on current transient limiter for controlling peak current flow in high capacity load  
[NASA-CASE-GSC-10413] c10 N71-26531  
Synchronous dc direct-drive system comprising multiple-loop hybrid control system controlling load directly connected to actuator  
[NASA-CASE-GSC-10065-1] c10 N71-27136  
Force balanced throttle valve for fuel control in rocket engines  
[NASA-CASE-NFO-10808] c15 N71-27432  
Energy absorption device in high precision gear train for protection against damage to components caused by stop loads  
[NASA-CASE-XNP-01848] c15 N71-28959  
Air bearing for use in exterior environment for moving heavy loads  
[NASA-CASE-WLF-10002] c15 N72-17451  
Measuring device for bearing preload using spring washers  
[NASA-CASE-MFS-20434] c11 N72-25288  
Variable direction force coupler for transmitting force along selectable curve path  
[NASA-CASE-MFS-20317] c15 N73-13463  
Versatile ergometer with work load control  
[NASA-CASE-MFS-21109-1] c05 N73-27941  
Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c35 N74-13129  
G-load measuring and indicator apparatus --- for aircraft  
[NASA-CASE-ARC-10806] c06 N74-27872

- Spring operated accelerator and constant force  
spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c35 N77-18417
- Penetrometer --- for determining load bearing  
characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c35 N77-27367
- Load regulating latch  
[NASA-CASE-MSC-19535-1] c37 N77-32499
- LOCATES SYSTEM**  
System for locating lightning strokes by  
coordination of directional antenna signals  
[NASA-CASE-KSC-10729-1] c09 N73-32110
- Position determination systems --- using orbital  
antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c17 N76-21250
- LOCKING**  
Releasable coupling device designed to receive  
and retain matching ends of electrical  
connectors  
[NASA-CASE-XMS-07846-1] c09 N69-21927
- LOCKS (FASTENERS)**  
Ball locking device which releases in response  
to small forces when subjected to high axial  
loads  
[NASA-CASE-XMF-01371] c15 N70-41829
- Low friction bearing and lock mechanism for  
two-axis gimbal carrying satellite payload  
[NASA-CASE-GSC-10556-1] c31 N71-26537
- Locking device for retaining turbine rotor  
blades on turbine wheel  
[NASA-CASE-XNP-00816] c28 N71-28928
- Longitudinal film gate and lock mechanism for  
securing film in motion picture cameras under  
vibration and high acceleration loads  
[NASA-CASE-LAR-10686] c14 N71-28935
- Design of quick release locking pin for joining  
two or more load-carrying structural members  
[NASA-CASE-MFS-18495] c15 N72-11385
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c54 N76-22914
- Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c05 N81-24047
- Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c33 N81-25299
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c52 N81-25661
- LOCOMOTION**  
Jet shoes for space locomotion  
[NASA-CASE-XLA-08491] c05 N69-21380
- Attitude control training device for astronauts  
permitting friction-free movement with five  
degrees of freedom  
[NASA-CASE-XMS-02977] c11 N71-10746
- Restraint torso for increased mobility and  
reduced physiological effects while wearing  
pressurized suits  
[NASA-CASE-MSC-12397-1] c05 N72-25119
- Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c54 N81-15699
- LOGARITHMIC RECEIVERS**  
Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c33 N78-32339
- LOGARITHMS**  
Technique for deriving logarithm of input signal  
using exponentially varying electric signal  
inversely  
[NASA-CASE-ERC-10267] c09 N72-23173
- LOGIC CIRCUITS**  
Selective gold diffusion on monolithic silicon  
chips for switching and nonswitching amplifier  
devices and circuits and linear and digital  
logic circuits  
[NASA-CASE-ERC-10072] c09 N70-11148
- Counter-divider circuit for accuracy and  
reliability in binary circuits  
[NASA-CASE-XNP-00421] c09 N70-34502
- Binary to binary-coded decimal converter using  
single set of logic circuits notwithstanding  
number of shift register decades  
[NASA-CASE-XNP-00432] c08 N70-35423
- Conversion system for increasing resolution of  
analog to digital converters  
[NASA-CASE-XAC-00404] c08 N70-40125
- Data processor having multiple sections  
activated at different times by selective  
power coupling to sections  
[NASA-CASE-XGS-04767] c08 N71-12494
- Binary sequence detector with few memory  
elements and minimized logic circuit complexity  
[NASA-CASE-XNF-05415] c08 N71-12505
- Bistable multivibrator circuits operating at  
high speed and low power dissipation  
[NASA-CASE-XGS-00823] c10 N71-15910
- Logic AND gate for fluid circuits  
[NASA-CASE-XLA-07391] c12 N71-17579
- Logic circuit to ripple add and subtract binary  
counters for spaceborne computers  
[NASA-CASE-XGS-04766] c08 N71-18602
- Constructing Exclusive-Or digital logic circuit  
in single module  
[NASA-CASE-XLA-07732] c08 N71-18751
- Stepping motor control apparatus exciting  
windings in proper time sequence to cause  
motor to rotate in either direction  
[NASA-CASE-GSC-10366-1] c10 N71-18772
- Serial digital decoder design with square  
circuit matrix and serial memory storage units  
[NASA-CASE-NFC-10150] c08 N71-24650
- Binary to decimal decoder logic circuit design  
with feedback control and display device  
[NASA-CASE-XKS-06167] c08 N71-24890
- Design and development of multistage current  
steering switch with inductively coupled  
magnetic cores  
[NASA-CASE-XNP-08567] c09 N71-26000
- Logic circuit for generating multibit binary  
code word in parallel  
[NASA-CASE-XNP-04623] c10 N71-26103
- Adaptive signal generating system and logic  
circuits for satellite television systems  
[NASA-CASE-GSC-11367] c10 N71-26374
- Transistorized switching logic circuits with  
tunnel diodes  
[NASA-CASE-GSC-10878-1] c10 N72-22236
- Logical function and circuit generator  
[NASA-CASE-XLA-05099] c09 N73-13209
- A synchronous binary array divider  
[NASA-CASE-ERC-10180-1] c60 N74-20836
- Four phase logic systems --- including  
integrated microcircuits  
[NASA-CASE-MSC-14240-1] c33 N75-14957
- A general logic structure for custom LSI circuits  
[NASA-CASE-NFC-14410-1] c33 N79-25314
- Combinational logic for generating gate drive  
signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c33 N81-27402
- Interleaving device  
[NASA-CASE-GSC-12111-2] c33 N81-29342
- Adaptive control system for line-commutated  
inverters  
[NASA-CASE-MFS-25209-1] c33 N81-31480
- Adaptive reference voltage generator for firing  
angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c33 N81-31481
- Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c52 N82-11770
- LONGITUDINAL CONTROL**  
Three-axis controller operated by hand-wrist  
motion for yaw, pitch, and roll control  
[NASA-CASE-XAC-01404] c05 N70-41581
- Pitch attitude stabilization system utilizing  
engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c08 N81-26152
- LONGITUDINAL STABILITY**  
An annular wing  
[NASA-CASE-FRC-11007-2] c02 N79-24959
- LOOP ANTENNAS**  
Collapsible, space erectable loop antenna system  
for space vehicle  
[NASA-CASE-XMF-00437] c07 N70-40202
- Automatic carrier acquisition system for phase  
locked loop receiver  
[NASA-CASE-NFO-11628-1] c07 N73-30113
- LOOPS**  
Tape cartridge with high capacity storage of  
endless-loop magnetic tape  
[NASA-CASE-XGS-00769] c14 N70-41647
- Endless loop tape transport mechanism for  
driving and tensioning recording medium in  
magnetic tape recorder  
[NASA-CASE-XGS-01223] c07 N71-10609
- Filter for third order phase locked loops in  
signal receivers  
[NASA-CASE-NFO-11941-1] c10 N73-27171
- High speed shutter --- electrically actuated  
ribbon loop for shuttering optical or fluid  
passageways  
[NASA-CASE-ARC-10516-1] c70 N74-21300

- Means for accommodating large overstrain in lead wires --- by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10168-1] c33 N74-22865
- Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c34 N79-20336
- Pseudonoise code tracking loop  
[NASA-CASE-MS-18035-1] c32 N81-15179
- Pulsed phase locked loop strain monitor  
[NASA-CASE-LAR-12772-1] c33 N81-15195
- LOW ASPECT RATIO**
- Aerospace configuration with low and high aspect ratio variability for high and low speed flight  
[NASA-CASE-XLA-00142] c02 N70-33286
- Aerodynamic configuration for aircraft capable of high speed flight and low drag for low speed takeoff or landing upon presently existing airfields  
[NASA-CASE-XLA-00806] c02 N70-34858
- LOW COST**
- Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c44 N76-28635
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c44 N78-24609
- LOW CURRENTS**
- Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NFO-14617-1] c33 N81-24338
- LOW DENSITY MATERIALS**
- Method and photodetector device for locating abnormal voids in low density materials  
[NASA-CASE-MPS-20044] c14 N71-28993
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c27 N74-27037
- Mixing insert for foam dispensing apparatus  
[NASA-CASE-MPS-20607-1] c37 N76-19436
- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c24 N78-27184
- Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c24 N79-16915
- Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c25 N80-16116
- LOW FREQUENCIES**
- Determining sway of buildings by low frequency device using pendulum  
[NASA-CASE-XMF-00479] c14 N70-34794
- Low-frequency radio navigation system  
[NASA-CASE-NFO-15264-1] c04 N81-22036
- LOW GRAVITY MANUFACTURING**
- Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MS-12611-1] c12 N76-15189
- Gas levitator and method for containerless processing  
[NASA-CASE-MPS-25509-1] c34 N82-10359
- LOW MOLECULAR WEIGHTS**
- Process for preparing high molecular weight polyaryloxysilanes from lower molecular weight forms  
[NASA-CASE-XMF-06674] c06 N71-28807
- LOW NOISE**
- Low phase noise frequency divider for use with deep space network communication system  
[NASA-CASE-NFO-11569] c10 N73-26229
- Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NFO-13490-1] c36 N76-31512
- Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c33 N82-11359
- LOW PASS FILTERS**
- Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c08 N79-23097
- LOW PRESSURE**
- Flowmeters for sensing low fluid flow rate and pressure for application to respiration rate studies  
[NASA-CASE-FEC-10022] c12 N71-26546
- Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c35 N79-33450
- LOW SPEED**
- Variable geometry manned orbital vehicle having high aerodynamic efficiency over wide speed range and incorporating auxiliary pivotal wings  
[NASA-CASE-XLA-03691] c31 N71-15674
- Device utilizing RC rate generators for continuous slow speed measurement  
[NASA-CASE-XMF-02966] c10 N71-24863
- LOW TEMPERATURE**
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c28 N81-14103
- LOW TEMPERATURE ENVIRONMENTS**
- Flexible, frangible electrochemical cell and package for operation in low temperature environment  
[NASA-CASE-XGS-10010] c03 N72-15986
- Optical crystal temperature gauge with fiber optic connections --- cryogenic systems  
[NASA-CASE-MS-18627-1] c74 N81-15818
- LOW TEMPERATURE TESTS**
- Cryostat for flexure fatigue testing of composite materials  
[NASA-CASE-XMF-02964] c14 N71-17659
- Cryostat for use with horizontal fatigue testing machines at low temperatures  
[NASA-CASE-XMF-10968] c14 N71-24234
- Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c39 N80-25693
- LOW VACUUM**
- Vibration damping system operating in low vacuum environment for spacecraft mechanisms  
[NASA-CASE-XMS-01620] c23 N71-15673
- LOW VOLTAGE**
- High speed low level voltage commutating switch  
[NASA-CASE-XAC-00060] c09 N70-39915
- Flexible monopole antenna with broad bandwidth and low voltage standing wave ratio  
[NASA-CASE-MS-12101] c09 N71-18720
- Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
[NASA-CASE-GSC-10114-1] c10 N71-27366
- LUBRICANTS**
- Metallic film diffusion into metal or ceramic surfaces for boundary lubrication in aerospace environments  
[NASA-CASE-XLF-01765] c18 N71-10772
- Metallic film diffusion for boundary lubrication in aerospace engineering  
[NASA-CASE-XLF-10337] c15 N71-24046
- Fluorinated esters of polycarboxylic acid and lubricating compositions for use at extreme temperature  
[NASA-CASE-MPS-21040-1] c06 N73-30098
- Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MPS-22411-1] c37 N74-21058
- Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c37 N74-21061
- Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c37 N80-29705
- LUBRICATING OILS**
- Fluid seal formed by flexible disk on rotating shaft to retain lubricating oils around shaft  
[NASA-CASE-XLF-05130-2] c15 N71-19570
- LUBRICATION**
- Hollow high strength rolling elements for antifriction bearings fabricated from preformed components  
[NASA-CASE-LEW-11026-1] c15 N73-33383
- Variable resistance constant tension and lubrication device --- using oil-saturated leather wiper  
[NASA-CASE-KSC-10723-1] c37 N75-13265
- Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c37 N76-15461
- LUBRICATION SYSTEMS**
- Development of hybrid bearing lubrication system with combination of standard type lubrication and magnetic flux field for earth atmosphere and space environment operation  
[NASA-CASE-XNP-01641] c15 N71-22997
- Lubrication for bearings by capillary action from oil reservoir of porous material  
[NASA-CASE-XNP-03972] c15 N71-23048
- Journal Bearings  
[NASA-CASE-LEW-11076-2] c37 N74-32921
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c37 N78-10467

**LUMINAIRES**

Visual target luminaires for retrofire attitude control  
 [NASA-CASE-XMS-12158-1] c31 N69-27499  
 Development of ultraviolet resonance lamp with improved transmission of radiation  
 [NASA-CASE-ARC-10030] c09 N71-12521  
 Lamp modulator for generating visual indication of presence and magnitude of signal  
 [NASA-CASE-KSC-10565] c09 N72-25250  
 Electrodeless lamp circuit driven by induction  
 [NASA-CASE-MFS-21214-1] c09 N73-30181  
 Uniform variable light source  
 [NASA-CASE-NFO-11429-1] c74 N77-21941

**LUMINOSITY**

Mechanism for measuring nanosecond time differences between luminous events using streak camera  
 [NASA-CASE-XLA-01987] c23 N71-23976

**LUMINOUS INTENSITY**

Filter arrangement for controlling light intensity in motion picture camera used in optical pyrometry  
 [NASA-CASE-XLA-00062] c14 N70-33254  
 Development of star intensity measuring system which minimizes effects of outside interference  
 [NASA-CASE-XNP-06510] c14 N71-23797  
 Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
 [NASA-CASE-XNP-04167-3] c36 N77-19416  
 Solar cell assembly --- for use under high intensity illumination  
 [NASA-CASE-LEW-11549-1] c44 N77-19571  
 Compact, high intensity arc lamp with internal magnetic field producing means  
 [NASA-CASE-NPO-11510-1] c33 N77-21315  
 System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
 [NASA-CASE-MFS-23512-1] c74 N79-11865

**LUNAR BASES**

Development and characteristics of natural circulation radiator for use with nuclear power plants installed in lunar space stations  
 [NASA-CASE-XHQ-03673] c33 N71-29046

**LUNAR COMMUNICATION**

Conversion system for transforming slow scan rate of Apollo TV camera on moon to fast scan of commercial TV  
 [NASA-CASE-XMS-07168] c07 N71-11300  
 Three transceiver lunar emergency system to relay voice communication of astronaut  
 [NASA-CASE-MFS-21042] c07 N72-25171

**LUNAR COMPOSITION**

Development and characteristics of penetrometer for measuring physical properties of lunar surface  
 [NASA-CASE-XLA-00934] c14 N71-22765

**LUNAR EXPLORATION**

Backpack carrier with retractable legs suitable for lunar exploration and convertible to rescue vehicle  
 [NASA-CASE-LAR-10056] c05 N71-12351  
 Development and characteristics of penetrometer for measuring physical properties of lunar surface  
 [NASA-CASE-XLA-00934] c14 N71-22765  
 Lightweight propulsion unit for movement of personnel and equipment across lunar surface  
 [NASA-CASE-MFS-20130] c28 N71-27585  
 Three transceiver lunar emergency system to relay voice communication of astronaut  
 [NASA-CASE-MFS-21042] c07 N72-25171

**LUNAR GRAVITATION**

Apparatus for training astronaut crews to perform on simulated lunar surface under conditions of lunar gravity  
 [NASA-CASE-XMS-04798] c11 N71-21474

**LUNAR GRAVITY SIMULATOR**

Lunar and planetary gravity simulator to test vehicular response to landing  
 [NASA-CASE-XLA-00493] c11 N70-34786

**LUNAR LANDING**

Lunar landing flight research vehicle  
 [NASA-CASE-XFR-00929] c31 N70-34966

**LUNAR LOGISTICS**

Lightweight propulsion unit for movement of personnel and equipment across lunar surface

[NASA-CASE-MFS-20130] c28 N71-27585

**LUNAR ROCKS**

Impact bit for cutting, collecting, and storing samples such as lunar rock cuttings  
 [NASA-CASE-XNP-01412] c15 N70-42034

**LUNAR SOIL**

Development of device for separating, collecting, and viewing soil particles  
 [NASA-CASE-XNP-09770] c15 N71-20440  
 Device which separates and screens particles of soil samples for vidicon viewing in vacuum and reduced gravity environments  
 [NASA-CASE-XNP-09770-3] c11 N71-27036  
 Portable penetrometer for analyzing soil characteristics  
 [NASA-CASE-MFS-20774] c14 N73-19420  
 Method for obtaining oxygen from lunar or similar soil  
 [NASA-CASE-MSC-12408-1] c46 N74-13011

**LUNAR SURFACE VEHICLES**

Resilient vehicle wheel for lunar surface travel  
 [NASA-CASE-MFS-20400] c31 N71-18611  
 Resilient wheel design with woven wire tire and abrasive treads for lunar surface vehicles  
 [NASA-CASE-MFS-13929] c15 N71-27091

**LUNGS**

Piston device for producing known constant positive pressure within lungs by using thoracic muscles  
 [NASA-CASE-XMS-01615] c05 N70-41329

**M****MACH NUMBER**

Wind tunnel supplementary Mach number minimum section insert  
 [NASA-CASE-LAB-12532-1] c09 N82-11088

**MACHINE TOOLS**

Rotary impact-type rock drill for recovering rock cuttings  
 [NASA-CASE-XNP-07478] c14 N69-21923  
 Description of protective device for providing safe operating conditions around work piece in machine or metal working tool  
 [NASA-CASE-XLE-01092] c15 N71-22797  
 Description of device for aligning stacked sheets of paper for repetitive cutting  
 [NASA-CASE-XMS-04178] c15 N71-22798  
 Development and characteristics of frusto-conical die nib for extrusion of refractory metals  
 [NASA-CASE-XLE-06773] c15 N71-23817  
 Design and development of layout tool for machine shop use to locate point in precise reference to straight or bowed reference edge  
 [NASA-CASE-FRC-10005] c15 N71-26145  
 Optical gauging system for monitoring machine tool alignment  
 [NASA-CASE-XAC-09489-1] c15 N71-26673  
 Caterpillar micropositioner for positioning machine tools adjacent to workpiece  
 [NASA-CASE-GSC-10780-1] c14 N72-16283  
 Geneva mechanism --- including star wheel and driver  
 [NASA-CASE-NFO-13281-1] c37 N75-13266  
 Zero torque gear head wrench  
 [NASA-CASE-NPO-13059-1] c37 N76-20480  
 Precision alinement apparatus for cutting a workpiece  
 [NASA-CASE-LAR-11658-1] c37 N77-14478  
 Toggle mechanism for pinching metal tubes  
 [NASA-CASE-GSC-12274-1] c37 N79-28550  
 Crystal cleaving machine  
 [NASA-CASE-GSC-12584-1] c76 N80-32246  
 Method and tool for machining a transverse slot about a bore  
 [NASA-CASE-LAR-11855-1] c37 N81-14319  
 Holding fixture for a hot stamping press  
 [NASA-CASE-GSC-12619-1] c37 N81-16470

**MACHINERY**

Design of mechanical device for stirring several test tubes simultaneously  
 [NASA-CASE-XAC-06956] c15 N71-21177  
 Precipitation detector and mechanism for stopping and restarting machinery at initiation and cessation of rain  
 [NASA-CASE-XLA-02619] c10 N71-26334  
 Apparatus for forming drive belts  
 [NASA-CASE-NPO-13205-1] c31 N74-32917

## MACHINING

Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications  
[NASA-CASE-HCN-10541-2] c15 N71-27135

Lathe tool and holder combination for machining resin impregnated fiberglass cloth laminates  
[NASA-CASE-XLA-10470] c15 N72-21489

Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c37 N75-31446

## MAGNESIUM

Chemical spot test for identifying magnesium or magnesium alloys used in aerospace applications  
[NASA-CASE-LAR-10953-1] c17 N73-27446

## MAGNESIUM ALLOYS

Procedure for bonding polytetrafluoroethylene thermal protective sleeves to magnesium alloy conical shell components with different thermal coefficients  
[NASA-CASE-XLA-01262] c15 N71-21404

Chemical spot test for identifying magnesium or magnesium alloys used in aerospace applications  
[NASA-CASE-LAR-10953-1] c17 N73-27446

## MAGNESIUM OXIDES

Method for determining presence and type of OH in MgO  
[NASA-CASE-NPO-10774] c06 N72-17095

## MAGNET COILS

Improved alternator with windings of superconducting materials acting as permanent magnet  
[NASA-CASE-XLE-02824] c03 N69-35890

Relay circuit breaker with magnetic latching to provide conductive and nonconductive paths for current devices  
[NASA-CASE-XSC-11277] c09 N71-29008

## MAGNETIC AMPLIFIERS

Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c33 N81-24338

## MAGNETIC CHARGE DENSITY

Ion engine with magnetic circuit for optimal discharge  
[NASA-CASE-XLE-01124] c28 N71-14043

## MAGNETIC CIRCUITS

Ion engine with magnetic circuit for optimal discharge  
[NASA-CASE-XLE-01124] c28 N71-14043

## MAGNETIC COILS

Time division multiplexer with magnetic latching relays  
[NASA-CASE-XNP-00431] c09 N70-38998

Linear magnetic braking system with nonuniformly wrapped primary coil producing constant braking force on secondary coil  
[NASA-CASE-XLE-05079] c15 N71-17652

Electroexplosive safe-arm initiator using electric driven electromagnet coils and magnets to align charge  
[NASA-CASE-LAR-10372] c09 N71-18599

Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c74 N78-18905

## MAGNETIC CONTROL

Magnetically opened diaphragm design with camera shutter and expansion tube applications  
[NASA-CASE-XLA-03660] c15 N71-21060

Magnetically controlled plasma accelerator capable of ignition in low density gaseous environment  
[NASA-CASE-XLA-00327] c25 N71-29184

Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c37 N76-18459

Magnetic bearing system  
[NASA-CASE-GSC-11978-1] c37 N77-17464

Low temperature latching solenoid  
[NASA-CASE-HSC-18106-1] c33 N82-11357

## MAGNETIC CORES

Variable frequency magnetic coupled multivibrator with temperature compensated frequency control circuit  
[NASA-CASE-XGS-00458] c09 N70-38604

Variable frequency magnetic coupled multivibrator with output signal of constant amplitude and waveform  
[NASA-CASE-XGS-00131] c09 N70-38995

Electronic counter circuit utilizing magnetic core and low power consumption  
[NASA-CASE-XNP-C8836] c09 N71-12515

Pulsed magnetic core memory element with blocking oscillator feedback for interrogation without loss of digital information  
[NASA-CASE-XGS-03303] c08 N71-18595

Describing magnetic core current switching device for steering bipolar current pulses to memory units  
[NASA-CASE-NFO-10201] c08 N71-18694

Reliable magnetic core circuit apparatus with application in selection matrices for digital memories  
[NASA-CASE-XNP-01318] c10 N71-23033

Magnetic current regulator for saturable core transformer  
[NASA-CASE-ERC-10075] c09 N71-24800

Power switch with transfluxor type magnetic core  
[NASA-CASE-NFO-10242] c09 N71-24803

Unsaturating magnetic core transformer design with warning signal for electrical power processing equipment  
[NASA-CASE-ERC-10125] c09 N71-24893

Temperature sensitive magnetometer with pulsating thermally cycled magnetic core  
[NASA-CASE-XAC-03740] c14 N71-26135

Digital magnetic core memory with sensing amplifier circuits  
[NASA-CASE-XNP-01012] c08 N71-28925

Saturable magnetic core and signal detection for indicating impending saturation  
[NASA-CASE-ERC-10089] c23 N72-17747

Commutator for steering precisely controlled bidirectional currents through numerous loads by use of magnetic core shift registers  
[NASA-CASE-NFO-10743] c08 N72-21199

Banded transformer cores  
[NASA-CASE-NPO-11966-1] c33 N74-17928

## MAGNETIC DIPOLES

Torque meter for determining magnitude of torque generated by interaction of magnetic dipole between test specimen and ambient magnetic field  
[NASA-CASE-XGS-01013] c14 N71-23725

## MAGNETIC DISKS

Device for removing plastic dust cover from digital computer disk packs for inspection and cleaning  
[NASA-CASE-LAR-10590-1] c15 N70-26819

## MAGNETIC FIELD CONFIGURATIONS

Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NFO-13663-1] c35 N77-14406

Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c74 N78-18905

Linear magnetic bearings --- active magnetic suspension of armatures  
[NASA-CASE-GSC-12582-1] c37 N81-16469

## MAGNETIC FIELDS

Magnetically diffused radial electric arc heater  
[NASA-CASE-XLA-00330] c33 N70-34540

Method and apparatus for communicating through ionized layer of gases surrounding spacecraft during reentry into planetary atmospheres  
[NASA-CASE-XLA-01127] c07 N70-41372

Venting device for liquid propellant storage tank using magnetic field to separate liquid and gaseous phases  
[NASA-CASE-XLE-01449] c15 N70-41646

Ion engine with magnetic circuit for optimal discharge  
[NASA-CASE-XLE-01124] c28 N71-14043

Development of wide range linear fluxgate magnetometer  
[NASA-CASE-XGS-01587] c14 N71-15962

Magnetic element position sensing device, using misaligned electromagnets  
[NASA-CASE-XGS-07514] c23 N71-16099

Development of non-magnetic indexing device for orienting magnetic flux sensing instrument in magnetic field without generation of detrimental magnetic fields  
[NASA-CASE-XGS-02422] c15 N71-21529

Negation of magnetic fields produced by thin waferlike circuit elements in space vehicles  
[NASA-CASE-XGS-03390] c03 N71-23187

Torque meter for determining magnitude of torque generated by interaction of magnetic dipole between test specimen and ambient magnetic field  
[NASA-CASE-XGS-01013] c14 N71-23725

- Fluxgate magnetometer for measuring magnetic field along two axes using one sensor  
[NASA-CASE-GSC-10441-1] c14 N71-27325
- Segmented superconducting magnet producing staggered magnetic field and suitable for broadband traveling wave masers  
[NASA-CASE-XGS-10518] c16 N71-28554
- Magnetic method for detection of aircraft position relative to runway  
[NASA-CASE-ARC-10179-1] c21 N72-22619
- Radial magnetic field for ion thruster  
[NASA-CASE-LEW-10770-1] c28 N72-22770
- Automatic shunting of ion thruster magnetic field when thruster is not operating  
[NASA-CASE-LEW-10835-1] c28 N72-22771
- Apparatus for determining distance to lighting strokes from single station by magnetic and electric field sensing antennas  
[NASA-CASE-KSC-10698] c07 N73-20175
- Superconducting magnetic field trapping device for producing magnetic field in air  
[NASA-CASE-XNP-01185] c26 N73-28710
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c33 N74-10195
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c35 N76-16390
- Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c33 N77-21315
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c34 N78-17335
- Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c28 N80-20402
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c28 N81-14103
- MAGNETIC FILMS**  
Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NFO-11336-1] c76 N79-16678
- MAGNETIC FLUX**  
Excitation and detection circuitry for flux responsive magnetic head  
[NASA-CASE-XNP-04183] c09 N69-24329
- Cryogenic flux-gated magnetometer using superconductors  
[NASA-CASE-XAC-02407] c14 N69-27423
- Flux gate magnetometer with toroidal gating coil and solenoidal output coil for signal modulation or amplification  
[NASA-CASE-XGS-01881] c09 N70-40123
- Development of hybrid bearing lubrication system with combination of standard type lubrication and magnetic flux field for earth atmosphere and space environment operation  
[NASA-CASE-XNP-01641] c15 N71-22997
- Magnetic current regulator for saturable core transformer  
[NASA-CASE-ERC-10075] c09 N71-24800
- Magnetic flux pump for changing intensity of magnetic fields  
[NASA-CASE-XNP-01187] c15 N73-28516
- Method for increasing intensity of magnetic field by transferring flux  
[NASA-CASE-XNP-01188] c15 N73-32361
- Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c37 N75-18574
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c33 N81-22279
- MAGNETIC FORMING**  
Portable magnetomotive hammer for metal working  
[NASA-CASE-XNP-03793] c15 N71-24833
- Method and apparatus for portable high precision magnetomotive bulging, constricting, and joining of large diameter metal tubes  
[NASA-CASE-XNP-05114-3] c15 N71-24865
- MAGNETIC INDUCTION**  
Continuous operation, single phased, induction plasma accelerator producing supersonic speeds  
[NASA-CASE-XLA-01354] c25 N70-36946
- Automatic power supply circuit design for driving inductive loads and minimizing power consumption including solenoid example  
[NASA-CASE-NPO-10716] c09 N71-24892
- Double-induction variable speed system for constant-frequency electrical power generation  
[NASA-CASE-ERC-10065] c09 N71-27364
- Microwave generator using Gunn effect for magnetic tuning  
[NASA-CASE-NFC-12106] c09 N73-15235
- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c70 N74-21300
- MAGNETIC LENSES**  
Quadrupole mass spectrometer using noise spectrum for ion separation and identification  
[NASA-CASE-XNP-04231] c14 N73-32325
- MAGNETIC MATERIALS**  
Low density and low viscosity magnetic propellant for use under zero gravity conditions  
[NASA-CASE-XLE-01512] c12 N70-40124
- MAGNETIC MEASUREMENT**  
Cryogenic flux-gated magnetometer using superconductors  
[NASA-CASE-XAC-02407] c14 N69-27423
- Development of wide range linear fluxgate magnetometer  
[NASA-CASE-XGS-01587] c14 N71-15962
- Active RC filter networks and amplifiers for deep space magnetic field measurement  
[NASA-CASE-XAC-05462-2] c10 N72-17171
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c35 N76-16390
- MAGNETIC POLES**  
Design of magnetohydrodynamic induction machine with end poles which produce compensating magnetic fields  
[NASA-CASE-XNP-07481] c25 N69-21929
- Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NFO-13663-1] c35 N77-14406
- MAGNETIC PUMPING**  
Magnetic flux pump for changing intensity of magnetic fields  
[NASA-CASE-XNP-01187] c15 N73-28516
- Method for increasing intensity of magnetic field by transferring flux  
[NASA-CASE-XNP-01188] c15 N73-32361
- Magnetocaloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c37 N74-27904
- MAGNETIC RECORDING**  
Development of data storage system for storing digital data in high density format on magnetic tape  
[NASA-CASE-XNP-02778] c08 N71-22710
- Magnetic recording head composed of ferrite core coated with thin film of aluminum-iron-silicon alloy  
[NASA-CASE-GSC-10097-1] c08 N71-27210
- Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NPO-10872-1] c35 N79-16246
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NFO-11336-1] c76 N79-16678
- MAGNETIC SIGNALS**  
Plural recorder system which limits signal recording to signals of sufficient interest  
[NASA-CASE-XMS-06949] c09 N69-21467
- MAGNETIC STORAGE**  
Nondestructive interrogating and state changing circuit for binary magnetic storage elements  
[NASA-CASE-XGS-00174] c08 N70-34743
- Magnetic matrix memory system for nondestructive reading of information contained in matrix  
[NASA-CASE-XMF-05835] c08 N71-12504
- Pulse duration control device for driving slow response time loads in selected sequence including switching and delay circuits and magnetic storage  
[NASA-CASE-XGS-04224] c10 N71-26418
- Redundant memory for enhanced reliability of digital data processing system  
[NASA-CASE-GSC-10564] c10 N71-29135
- Momentum wheel design for spacecraft attitude control and magnetic drum and head system for data storage  
[NASA-CASE-NPO-11481] c21 N73-13644
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c28 N78-24365
- MAGNETIC SUSPENSION**  
Magnetic suspension and pointing system  
[NASA-CASE-LAB-11889-2] c37 N78-27424



- Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c35 N79-26372
- Containerless melting and rapid solidification apparatus and method  
[NASA-CASE-MFS-25305-1] c35 N81-16427
- Linear magnetic bearings --- active magnetic suspension of armatures  
[NASA-CASE-GSC-12582-1] c37 N81-16469
- Stirling cycle cryogenic cooler --- magnetically suspended pistons  
[NASA-CASE-GSC-12697-1] c31 N82-11312
- MAGNETIC SWITCHING**
- Power switch with transfluxor type magnetic core  
[NASA-CASE-NFO-10242] c09 N71-24803
- Design and development of multistage current steering switch with inductively coupled magnetic cores  
[NASA-CASE-XNP-06567] c09 N71-26000
- MAGNETIC TAPE TRANSPORTS**
- Reel safety brake  
[NASA-CASE-GSC-11960-1] c37 N77-14479
- MAGNETIC TAPES**
- Tape cartridge with high capacity storage of endless-loop magnetic tape  
[NASA-CASE-XGS-00769] c14 N70-41647
- Endless loop tape transport mechanism for driving and tensioning recording medium in magnetic tape recorder  
[NASA-CASE-XGS-01223] c07 N71-10609
- Development of low friction magnetic recording tape  
[NASA-CASE-XGS-00373] c23 N71-15978
- System for recording and reproducing PCM data from data stored on magnetic tape  
[NASA-CASE-XGS-01021] c08 N71-21042
- Kinetic and static friction force measurement between magnetic tape and magnetic head surfaces  
[NASA-CASE-XNP-08680] c14 N71-22995
- Technique for recovery of voice data from heat damaged magnetic tape  
[NASA-CASE-MSC-14219-1] c32 N74-27612
- Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c33 N76-18353
- MAGNETIC TRANSDUCERS**
- Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c35 N78-32397
- MAGNETIZATION**
- Permanently magnetized ion engine casing construction for use in spacecraft propulsion systems  
[NASA-CASE-XNP-06942] c28 N71-23293
- MAGNETO-OPTICS**
- Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c36 N74-13205
- MAGNETOHYDRODYNAMIC FLOW**
- Improving performance of magnetoplasma dynamic arc rocket engine  
[NASA-CASE-LEW-11180-1] c25 N73-25760
- MAGNETOHYDRODYNAMIC GENERATORS**
- Design of magnetohydrodynamic induction machine with end poles which produce compensating magnetic fields  
[NASA-CASE-XNP-07481] c25 N69-21929
- Magnetohydrodynamic generator for mixing nonconductive gas and liquid metal mist to form slugs  
[NASA-CASE-XLE-02083] c03 N69-39983
- Thermoelectric power conversion by liquid metal flowing through magnetic field  
[NASA-CASE-XNP-00644] c03 N70-36803
- Crossed field MHD plasma generator-accelerator  
[NASA-CASE-XLA-03374] c25 N71-15562
- Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c44 N81-32609
- MAGNETOMETERS**
- Nonmagnetic thermal motor for magnetometer movement  
[NASA-CASE-XAR-03786] c09 N69-21313
- Cryogenic flux-gated magnetometer using superconductors  
[NASA-CASE-XAC-02407] c14 N69-27423
- Flux gate magnetometer with toroidal gating coil and solenoidal output coil for signal modulation or amplification  
[NASA-CASE-XGS-01881] c09 N70-40123
- Development of wide range linear fluxgate magnetometer  
[NASA-CASE-XGS-01587] c14 N71-15962
- Design and development of optically pumped resonance magnetometer for determining vectoral components in spatial coordinate system  
[NASA-CASE-XGS-04879] c14 N71-20428
- Temperature sensitive magnetometer with pulsating thermally cycled magnetic core  
[NASA-CASE-XAC-03740] c14 N71-26135
- Fluxgate magnetometer for measuring magnetic field along two axes using one sensor  
[NASA-CASE-GSC-10441-1] c14 N71-27325
- Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c35 N75-13213
- Magnetometer using superconducting rotating body  
[NASA-CASE-NFC-13388-1] c35 N76-16390
- Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c04 N76-20114
- Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c04 N77-19056
- Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c35 N78-32397
- A low energy electron magnetometer  
[NASA-CASE-LAR-12706-1] c35 N81-19428
- MAGNETRONS**
- Tuning arrangement for frequency control of magnetron-type electron discharge device  
[NASA-CASE-XNI-09771] c09 N71-24841
- MAGNETS**
- Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c52 N77-25772
- Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NFO-14324-1] c72 N80-27163
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c33 N81-22279
- MAGNIFICATION**
- Camera adapter design for image magnification including lens and illuminator  
[NASA-CASE-XMI-03844-1] c14 N71-26474
- Passive type, magnifying scratch gage, force transducer  
[NASA-CASE-LAR-10496-1] c14 N72-22437
- Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c74 N78-18905
- MAGNITUDE**
- Torque meter for determining magnitude of torque generated by interaction of magnetic dipole between test specimen and ambient magnetic field  
[NASA-CASE-XGS-01013] c14 N71-23725
- MAINTENANCE**
- Self testing and repairing computer comprising control and diagnostic unit and rollback points for error correction  
[NASA-CASE-NPO-10567] c08 N71-24633
- Development of process for bonding resinous body in cavities of honeycomb structures  
[NASA-CASE-MSC-12357] c15 N73-12489
- Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c24 N74-30001
- System for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c02 N81-14967
- System and method for refurbishing and processing parachutes --- monorial conveyor system  
[NASA-CASE-KSC-11042-2] c02 N81-26073
- Method of repairing surface damage to porous refractory substrates --- shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c27 N81-29231
- MALFUNCTIONS**
- Aircraft instrument for indicating malfunctions during takeoff  
[NASA-CASE-XLA-00100] c14 N70-36807
- MANDRELS**
- Mandrel for shaping solid propellant rocket fuel into engine casing  
[NASA-CASE-XLA-00304] c27 N70-34783
- Rotating, multisided mandrel for fabricating gored inflatable spacecraft  
[NASA-CASE-XLA-04143] c15 N71-17687
- Method of making solid propellant rocket motor having reliable high altitude capabilities, long shelf life, and capable of firing with nozzle closure with foamed plastic permanent

- mandrel  
[NASA-CASE-XLA-04126] c28 N71-26779
- MANGANESE**  
Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c76 N79-16678
- MANIFOLDS**  
Injector manifold assembly for bipropellant rocket engines providing for fuel propellant to serve as coolant  
[NASA-CASE-XMF-00148] c28 N70-38710  
Collimated beam manifold and method for using the same --- laser beams  
[NASA-CASE-MFS-25312-1] c74 N80-34251
- MANIPULATORS**  
Manipulator for remote handling in zero gravity environment  
[NASA-CASE-MFS-14405] c15 N72-28495  
Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c54 N75-12616  
Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c18 N75-27041  
Cooperative multi-axis sensor for teleoperation of article manipulating apparatus  
[NASA-CASE-NPO-13386-1] c54 N75-27758  
Remotely operable articulated manipulator  
[NASA-CASE-MFS-22707-1] c37 N76-15457  
Remote manipulator system  
[NASA-CASE-MFS-22022-1] c37 N76-15460  
Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c54 N77-32721  
Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c54 N78-17676  
Terminal guidance sensor system  
[NASA-CASE-NFO-14521-1] c54 N79-20746  
Compact artificial hand  
[NASA-CASE-NPO-13906-1] c54 N79-24652  
Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c37 N79-28551  
Apparatus for sequentially transporting containers  
[NASA-CASE-MFS-23846] c37 N80-29704  
Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c37 N81-14320  
Tactile sensing system --- manipulator controllers  
[NASA-CASE-NPO-15094-1] c33 N81-16386  
Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c54 N81-26718  
Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NFO-14521-1] c37 N81-27519
- MANNED ORBITAL LABORATORIES**  
Artificial gravity system for simulating self-locomotion capability of astronauts in rotating environments  
[NASA-CASE-XLA-03127] c11 N71-10776
- MANNED ORBITAL RESEARCH LABORATORIES**  
Manned space station collapsible for launching and self-erectable in orbit  
[NASA-CASE-XLA-00678] c31 N70-34296  
Radial module manned space station with artificial gravity environment  
[NASA-CASE-XMS-01906] c31 N70-41373
- MANNED SPACE FLIGHT**  
Three-port transfer valve with one port open continuously suitable for manned space flight  
[NASA-CASE-XAC-01158] c15 N71-23051  
Device for removing air from water for use in life support systems in manned space flight  
[NASA-CASE-XLA-8914] c15 N73-12492
- MANNED SPACECRAFT**  
Manned space capsule configuration for orbital flight and atmospheric reentry  
[NASA-CASE-XLA-00149] c31 N70-37938  
Delta winged, manned reentry vehicle capable of horizontal glide landing at low speeds  
[NASA-CASE-XLA-00241] c31 N70-37986  
Parachute system for lowering manned spacecraft from post-reentry to ocean landing  
[NASA-CASE-XLA-00195] c02 N70-38009  
Design and configuration of manned space capsule  
[NASA-CASE-XLA-01332] c31 N71-15664  
Development of method for producing artificial gravity in manned spacecraft  
[NASA-CASE-XNP-02595] c31 N71-21881  
Chlorine generator for purifying water in life support systems of manned spacecraft
- [NASA-CASE-XLA-08913] c14 N71-28933  
Collapsible couch system for manned space vehicles  
[NASA-CASE-MSC-13140] c05 N72-11085  
Spacecraft with artificial gravity and earthlike atmosphere  
[NASA-CASE-LEW-11101-1] c31 N73-32750
- MANOMETERS**  
Magnetically centered liquid column float  
[NASA-CASE-XAC-00030] c14 N70-34820  
Absolute pressure measuring device for measuring gas density level in high vacuum range  
[NASA-CASE-LAE-10000] c14 N73-30394
- MANUAL CONTROL**  
Multiple circuit switch apparatus requiring minimum hand and eye movement by operator  
[NASA-CASE-XAC-03777] c10 N71-15909  
Manual control mechanism for adjusting control rod to null position  
[NASA-CASE-XLA-01808] c15 N71-20740  
Manually activated heat pump for mechanically converting human operator output into heat energy  
[NASA-CASE-NFO-10677] c05 N72-11084  
Development of flight simulator system to show position of joystick displacement  
[NASA-CASE-NFO-11497] c08 N73-25206  
Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c08 N74-10942  
G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c35 N75-29381
- MANUFACTURING**  
Selective gold diffusion on monolithic silicon chips for switching and nonswitching amplifier devices and circuits and linear and digital logic circuits  
[NASA-CASE-ERC-10072] c09 N70-11148  
Standard coupling design for mass production  
[NASA-CASE-XMS-02532] c15 N70-41808  
Method for making screen with unlimited fineness of mesh and screen thickness  
[NASA-CASE-XLE-00953] c15 N71-15966  
Describing apparatus for manufacturing operations in low and zero gravity environments of orbital space flight  
[NASA-CASE-MFS-20410] c15 N71-19214  
Manufacture of fluid containers from fused coated polyester sheets having resealable septum  
[NASA-CASE-MFC-10123] c15 N71-24835  
Method of making solid propellant rocket motor having reliable high altitude capabilities, long shelf life, and capable of firing with nozzle closure with foamed plastic permanent mandrel  
[NASA-CASE-XLA-04126] c28 N71-26779  
Shielded flat conductor cable fabricated by electroless and electrolytic plating  
[NASA-CASE-MFS-13687] c09 N71-28691  
Production method for manufacturing porous tungsten bodies from tungsten powder particles  
[NASA-CASE-XNP-04339] c17 N71-29137  
Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c44 N74-19692  
Apparatus for forming drive belts  
[NASA-CASE-NFO-13205-1] c31 N74-32917  
Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAE-10337-1] c24 N75-30260  
Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c76 N76-25049  
Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c44 N77-22607  
Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c37 N77-23482  
Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c35 N77-24454  
Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c44 N80-16452  
Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NFO-10424-1] c27 N81-24258
- MAPPING**  
Design and development of random function tracer for obtaining coordinates of points on contour maps

- [NASA-CASE-XIA-01401] c15 N71-21179  
Spacecraft transponder and ground station radar system for mapping planetary surfaces  
[NASA-CASE-NPO-11001] c07 N72-21118  
Seismic vibration source  
[NASA-CASE-NPO-14112-1] c46 N79-22679
- MAPS**  
Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10625-1] c19 N74-21015  
Optical process for producing classification maps from multispectral data  
[NASA-CASE-MSC-14472-1] c43 N77-10584
- MASERS**  
Segmented superconducting magnet producing staggered magnetic field and suitable for broadband traveling wave masers  
[NASA-CASE-XGS-10513] c16 N71-28554  
Traveling wave maser for operation in 7 to 20 GHz frequency range  
[NASA-CASE-NPO-11437] c16 N72-28521  
Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c36 N76-31512  
Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c31 N78-25256  
External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c36 N79-14362  
Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c36 N80-18372  
Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c32 N81-14186  
Maser amplifier slow wave structure --- detecting weak signals from spacecraft  
[NASA-CASE-NPO-15211-1] c36 N81-24425  
Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c36 N81-24426
- MASKING**  
Reusable masking boot for chemical machining operations  
[NASA-CASE-XNP-02092] c15 N70-42033  
Composition and process for improving definition of resin masks used in chemical etching  
[NASA-CASE-XGS-04993] c14 N71-17574
- MASS**  
Apparatus for measuring human body mass in zero or reduced gravity environment  
[NASA-CASE-XMS-03371] c05 N70-42000  
Tuned damped vibration absorber for mass vibrating in more than one degree of freedom for use with wind tunnel models  
[NASA-CASE-LAR-10083-1] c15 N71-27006  
Fluid mass sensor for a zero gravity environment  
[NASA-CASE-MSC-14653-1] c35 N77-19385
- MASS BALANCE**  
Two plane balance for simultaneous measurements of multiple forces  
[NASA-CASE-XAC-00073] c14 N70-34813  
Control system for pressure balance device used in calibrating pressure gages  
[NASA-CASE-XMF-04134] c14 N71-23755
- MASS DISTRIBUTION**  
Electronic recording system for spatial mass distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NPO-10185] c10 N71-26339
- MASS FLOW**  
Rocket engine injector orifice to accommodate changes in density, velocity, and pressure, thereby maintaining constant mass flow rate of propellant into rocket combustion chamber  
[NASA-CASE-XLE-03157] c28 N71-24736  
Mass flow meter containing beta source for measuring nonpolar liquid flow  
[NASA-CASE-MFS-20485] c14 N72-11365  
Generation of high temperature, high mass flow, and high Reynolds number air at hypersonic speeds  
[NASA-CASE-LAR-10578-1] c12 N73-25262
- MASS SPECTROMETERS**  
Analytical photoionization mass spectrometer with argon gas filter between light source and monochromator  
[NASA-CASE-LAR-10180-1] c06 N71-13461
- Design and characteristics of time of flight mass spectrometer to measure or analyze gases at low pressures and time of flight of single gas molecule  
[NASA-CASE-XNP-01056] c14 N71-23041  
Ion microprobe mass spectrometer with cooled electrode target for analyzing traces of fluids  
[NASA-CASE-ERC-10014] c14 N71-28863  
Test chambers with orifice and helium mass spectrometer for detecting leak rate of encapsulated semiconductor devices  
[NASA-CASE-ERC-10150] c14 N71-28992  
Apparatus for analyzing gas samples in containers including vacuum chamber, mass spectrometer, and gas chromatography  
[NASA-CASE-GSC-10903-1] c14 N73-12444  
Quadrupole mass spectrometer using noise spectrum for ion separation and identification  
[NASA-CASE-XNP-04231] c14 N73-32325  
Fast scan control for deflection type mass spectrometers  
[NASA-CASE-LAR-11428-1] c35 N74-34857  
Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-MFC-13663-1] c35 N77-14406  
Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c35 N77-24455  
Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c35 N80-28686
- MASS SPECTROSCOPY**  
Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c35 N76-16393  
Fluid sampling device  
[NASA-CASE-GSC-12143-1] c35 N77-32456
- MATERIAL ABSORPTION**  
Describing sorption vacuum trap having housing with group of reentrant wall portions projecting into internal gas-pervious container filled with gas and vapor sorbent material  
[NASA-CASE-XER-09519] c14 N71-18483
- MATERIALS HANDLING**  
Two component valve assembly for cryogenic liquid transfer regulation  
[NASA-CASE-XLF-00397] c15 N70-36492  
Catalyst bed element removing tool  
[NASA-CASE-XFR-00811] c15 N70-36901  
Air bearings for near frictionless transfer of loads from one body to another  
[NASA-CASE-XMF-01887] c15 N71-10617  
Quick-release coupling for fueling rocket vehicles with cryogenic propellants  
[NASA-CASE-XKS-01985] c15 N71-10782  
Method and apparatus for removing plastic insulation from wire using cryogenic equipment  
[NASA-CASE-MFS-10340] c15 N71-17628  
Fluid transferring system design for purging toxic, corrosive, or noxious fluids and fumes from materials handling equipment for cleansing and accident prevention  
[NASA-CASE-XMS-01905] c12 N71-21089  
Description of method for making homogeneous foamed materials in weightless environment using materials having different physical properties  
[NASA-CASE-XMF-09902] c15 N72-11387  
Design and characteristics of mechanically extended and telescoping boom on crane assembly  
[NASA-CASE-NPO-11118] c03 N72-25021  
Development of ultrasonic radiation equipment for removing material from host surface and vacuum apparatus for recovery of material  
[NASA-CASE-NPO-11213] c15 N73-20514  
Development and characteristics of system for skin packaging articles using thermoplastic film heating and vacuum operated equipment  
[NASA-CASE-MFS-20855] c15 N73-27405  
Apparatus for inserting and removing specimens from high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c31 N74-27900  
Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c37 N76-22540  
Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c37 N82-12441  
Acoustic system for material transport  
[NASA-CASE-NFO-15453-1] c71 N82-12889

**MATERIALS RECOVERY**

- Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c25 N76-18245
- Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c28 N80-23471
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c28 N81-15119

**MATERIALS SCIENCE**

- Flammability test chamber for testing materials in certain predetermined environments  
[NASA-CASE-KSC-10126] c11 N71-24985
- Device for measuring thermoelectric properties of materials under high pressure  
[NASA-CASE-NPO-11749] c14 N73-28486

**MATERIALS TESTS**

- Development of equipment for measuring thermal shock resistance of thin discs of material  
[NASA-CASE-XLE-02024] c14 N71-22964
- Multisample test chamber for exposing materials to X rays, temperature change, and gaseous conditions and determination of material effects  
[NASA-CASE-XMS-02930] c11 N71-23042
- Automated ball rebound resilience test equipment for determining viscoelastic properties of polymers  
[NASA-CASE-XLA-08254] c14 N71-26161
- Hermetic sealing device for ends of tubular bodies during materials testing operations  
[NASA-CASE-NPO-10431] c15 N71-29132
- Development of apparatus for testing burning rate and flammability of materials  
[NASA-CASE-XMS-09690] c33 N72-25913
- Multiaxial vibration device for making vibration tests along orthogonal axes of test specimen  
[NASA-CASE-MFS-20242] c14 N73-19421
- Material testing system with load sensor for applying and measuring cyclic tensile and compressive loads to test specimens  
[NASA-CASE-MFS-20673] c14 N73-20476

**MATHEMATICAL LOGIC**

- Logical function and circuit generator  
[NASA-CASE-XLA-05099] c09 N73-13209

**MATRICES (CIRCUITS)**

- Fabrication methods for matrices of solar cell submodules  
[NASA-CASE-XNP-05821] c03 N71-11056
- Magnetic matrix memory system for nondestructive reading of information contained in matrix  
[NASA-CASE-XMF-05835] c08 N71-12504
- Conductor for connecting parallel cells into submodules in series to form solar cell matrix  
[NASA-CASE-NPO-10821] c03 N71-19545
- Reliable magnetic core circuit apparatus with application in selection matrices for digital memories  
[NASA-CASE-XNP-01318] c10 N71-23033
- Serial digital decoder design with square circuit matrix and serial memory storage units  
[NASA-CASE-NPO-10150] c08 N71-24650
- Electrically connected matrix of discrete solar cell blanks  
[NASA-CASE-NPO-10591] c03 N72-22041

**MCLEOD GAGES**

- Automatic recording McLeod gage with three electrodes and solenoid valve connection  
[NASA-CASE-XLE-03280] c14 N71-23093
- Bakeable McLeod gage  
[NASA-CASE-XGS-01293-1] c35 N79-33450

**MEASURING INSTRUMENTS**

- Capacitance measuring device for determining flare accuracy on tapered tubes  
[NASA-CASE-XKS-03495] c14 N69-39785
- Characteristics and performance of electrical system to determine angular rotation  
[NASA-CASE-XMF-00447] c14 N70-33179
- Two plane balance for simultaneous measurements of multiple forces  
[NASA-CASE-XAC-00073] c14 N70-34813
- Parallel motion suspension device for measuring instruments  
[NASA-CASE-XNP-01567] c15 N7C-41310
- Transducer for measuring deflections from vibrating structures  
[NASA-CASE-XLA-03135] c32 N71-16428
- Gage for quality control of sealing surfaces of threaded boss  
[NASA-CASE-XMF-04966] c14 N71-17658

- Equipment for measuring partial water vapor pressure in gas tank  
[NASA-CASE-XMS-01618] c14 N71-20741
- Gauge for measuring quantity of liquid in spherical tank in reduced gravity  
[NASA-CASE-XMS-06236] c14 N71-21007
- Nonreusable energy absorbing device comprising ring member with plurality of recesses, cutting members, and guide member mounted in each recess  
[NASA-CASE-XMF-10040] c15 N71-22877
- Ablation sensor for measuring surface ablation rate of material on vehicles entering earth's atmosphere on entry into planetary atmospheres  
[NASA-CASE-XLA-01791] c14 N71-22991
- Test fixture for measuring moment of inertia of irregularly shaped body with multiple axes  
[NASA-CASE-XGS-04023] c14 N71-22992
- Electron beam deflection devices for measuring electric fields  
[NASA-CASE-XMF-10289] c14 N71-23699
- Device for measuring two orthogonal components of force with gallium flotation of measuring target for use in vacuum environments  
[NASA-CASE-XAC-04885] c14 N71-23790
- Gage for measuring internal angle of flare on end of tube  
[NASA-CASE-XMF-04415] c14 N71-24693
- Device utilizing RC rate generators for continuous slow speed measurement  
[NASA-CASE-XMF-02966] c10 N71-24863
- Solid state force measuring electromechanical transducers made of piezoresistive materials  
[NASA-CASE-ERC-10088] c26 N71-25490
- Design and development of layout tool for machine shop use to locate point in precise reference to straight or bowed reference edge  
[NASA-CASE-FRC-10005] c15 N71-26145
- Volume displacement transducer for leak detection in hermetically sealed semiconductor devices  
[NASA-CASE-ERC-10033] c14 N71-26672
- Deformation measuring apparatus with feedback control for arbitrarily shaped structures  
[NASA-CASE-LAR-10098] c32 N71-26681
- Foam insulation thickness measuring and injection device for spacecraft applications  
[NASA-CASE-MFS-20261] c14 N71-27005
- Resonant infrasound gauging device for measuring liquid quantity in closed bladderless reservoir  
[NASA-CASE-MSC-11847-1] c14 N72-11363
- Measuring roll alignment of test body with respect to reference body  
[NASA-CASE-GSC-10514-1] c14 N72-20379
- Sensor for detecting and measuring energy, velocity and direction of travel of a cosmic dust particle  
[NASA-CASE-GSC-10503-1] c14 N72-20381
- Pumping and metering dual piston system and monitor for reaction chamber constituents  
[NASA-CASE-GSC-10218-1] c15 N72-21465
- Capacitive tank gaging device for monitoring one constituent of two phase fluid by sensing dielectric constant  
[NASA-CASE-MFS-21629] c14 N72-22442
- Development of mechanical device for measuring distance of point within sphere from surface of sphere  
[NASA-CASE-XLA-06683] c14 N72-28436
- Surface based altitude measuring system for accurately measuring altitude of airborne vehicle  
[NASA-CASE-ERC-10412-1] c09 N73-12211
- Instrument for measuring magnitude and direction of flow velocity in flow field  
[NASA-CASE-LAR-10855-1] c14 N73-13415
- Multiaxial vibration device for making vibration tests along orthogonal axes of test specimen  
[NASA-CASE-MFS-20242] c14 N73-19421
- Material testing system with load sensor for applying and measuring cyclic tensile and compressive loads to test specimens  
[NASA-CASE-MFS-20673] c14 N73-20476
- Development of droplet monitoring probe for use in analysis of droplet propagation in mixed-phase fluid stream  
[NASA-CASE-NPO-10985] c14 N73-20478
- Device for measuring thermoelectric properties of materials under high pressure

[NASA-CASE-NFO-11749] c14 N73-28486  
 Radio frequency source resistance measuring instruments of varied design  
 [NASA-CASE-NFO-11291-1] c14 N73-30388  
 Absolute pressure measuring device for measuring gas density level in high vacuum range  
 [NASA-CASE-LAR-100C0] c14 N73-30394  
 Thin film analyzer utilizing holographic techniques  
 [NASA-CASE-MFS-20823-1] c16 N73-30476  
 Three-axis adjustable loading structure  
 [NASA-CASE-FRC-10051-1] c35 N74-13129  
 Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
 [NASA-CASE-NPO-10617-1] c35 N74-22095  
 Apparatus and method for processing Korotkov sounds --- for blood pressure measurement  
 [NASA-CASE-MSC-13999-1] c52 N74-26626  
 Electric field measuring and display system --- for cloud formations  
 [NASA-CASE-KSC-10731-1] c33 N74-27862  
 Device for measuring tensile forces  
 [NASA-CASE-MFS-21723-1] c35 N74-27865  
 Measuring probe position recorder  
 [NASA-CASE-LAR-10806-1] c35 N74-32877  
 Meter for use in detecting tension in straps having predetermined elastic characteristics  
 [NASA-CASE-MFS-22189-1] c35 N75-19615  
 Thrust measurement  
 [NASA-CASE-XMS-05731] c35 N75-29382  
 Method and apparatus for measuring web material wound on a reel  
 [NASA-CASE-GSC-11902-1] c38 N77-17495  
 Optical instrument employing reticle having preselected visual response pattern formed thereon  
 [NASA-CASE-ARC-1C976-1] c74 N77-22950  
 Direct reading inductance meter  
 [NASA-CASE-NPO-13792-1] c35 N77-32455  
 Ruler for making navigational computations  
 [NASA-CASE-XNP-01458] c04 N78-17631  
 Apparatus for handling micron size range particulate material  
 [NASA-CASE-NFO-10151] c37 N78-17386  
 Apparatus for measuring a scrubate dispersed in a fluid stream  
 [NASA-CASE-ARC-10896-1] c35 N78-19465  
 Condition sensor system and method  
 [NASA-CASE-MSC-14805-1] c54 N78-32720  
 Lightning current waveform measuring system  
 [NASA-CASE-KSC-11018-1] c33 N79-10337  
 Time domain phase measuring apparatus  
 [NASA-CASE-GSC-12228-1] c33 N79-10338  
 Fluid velocity measuring device  
 [NASA-CASE-LAR-11729-1] c34 N79-12359  
 Method and apparatus for measuring minority carrier lifetimes and bulk diffusion length in P-N junction solar cells  
 [NASA-CASE-NPO-14100-1] c44 N75-12541  
 Lightning current detector  
 [NASA-CASE-KSC-11057-1] c33 N79-14305  
 Contour measurement system  
 [NASA-CASE-MFS-23726-1] c43 N79-26439  
 Borehole geological assessment  
 [NASA-CASE-NPO-14231-1] c46 N80-10709  
 Displacement probes with self-contained exciting medium  
 [NASA-CASE-LAR-11690-1] c35 N80-14371  
 Viscosity measuring instrument  
 [NASA-CASE-NPO-14501-1] c35 N80-18357  
 Method and device for destructive detection of a substance --- useful in determining the concentration of carbon fibers or pollutant particles  
 [NASA-CASE-NPO-14940-1] c35 N80-21723  
 Geological assessment probe  
 [NASA-CASE-NPO-14556-1] c46 N80-24906  
 Method and automated apparatus for detecting coliform organisms  
 [NASA-CASE-MSC-16777-1] c51 N80-27067  
 Skin friction measuring device for aircraft  
 [NASA-CASE-FRC-11029-1] c06 N81-17057  
 Heat pipe cooled probe  
 [NASA-CASE-LAR-12588-1] c44 N81-24525  
 Faraday rotation measurement method and apparatus  
 [NASA-CASE-NPO-14839-1] c35 N82-15381

**MECHANICAL DEVICES**  
 Mechanical coordinate converter for use with

spacecraft tracking antennas  
 [NASA-CASE-XNP-00614] c14 N70-36907  
 Load cell protection device using spring-loaded breakaway mechanism  
 [NASA-CASE-XMS-06782] c32 N71-15974  
 Design and development of satellite despinn device  
 [NASA-CASE-XMF-08523] c31 N71-20396  
 Development of two force component measuring device  
 [NASA-CASE-XAC-04886-1] c14 N71-20439  
 Design, development, and characteristics of latching mechanism for operation in limited access areas  
 [NASA-CASE-XMS-03745] c15 N71-21076  
 Design of mechanical device for stirring several test tubes simultaneously  
 [NASA-CASE-XAC-06956] c15 N71-21177  
 Design and development of random function tracer for obtaining coordinates of points on contour maps  
 [NASA-CASE-XLA-01401] c15 N71-21179  
 Design and characteristics of device for closing canisters under high vacuum conditions  
 [NASA-CASE-XLA-01446] c15 N71-21528  
 Development of non-magnetic indexing device for orienting magnetic flux sensing instrument in magnetic field without generation of detrimental magnetic fields  
 [NASA-CASE-XGS-02422] c15 N71-21529  
 Design and development of module joint clamping device for application to solar array construction  
 [NASA-CASE-XNP-02341] c15 N71-21531  
 Hand controller operable about three respectively perpendicular axes and capable of actuating signal generators for attitude control devices  
 [NASA-CASE-XMS-07487] c15 N71-23255  
 Metal alloy bearing materials for space applications  
 [NASA-CASE-XLF-05033] c15 N71-23810  
 Mechanical actuator wherein linear motion changes to rotational motion  
 [NASA-CASE-XGS-04548] c15 N71-24045  
 Design and characteristics of device for showing amount of cable payed out from winch and load imposed  
 [NASA-CASE-MSC-12052-1] c15 N71-24599  
 Design and development of release mechanism for spacecraft components, releasable despinn weights, and extensible gravity booms  
 [NASA-CASE-XGS-08718] c15 N71-24600  
 Apparatus for mechanically dispersing ultrafine metal powders subjected to shock waves  
 [NASA-CASE-XLF-04946] c17 N71-24911  
 Self lubricating gears and other mechanical parts having surface adapted to frictional contact  
 [NASA-CASE-MFS-14971] c15 N71-24984  
 Design and development of layout tool for machine shop use to locate point in precise reference to straight or bowed reference edge  
 [NASA-CASE-FRC-10005] c15 N71-26145  
 Design and development of linear actuator based on bimetallic spring expansion  
 [NASA-CASE-NPO-10637] c15 N72-12409  
 Characteristics of lightweight actuator for imparting linear motion using elongated output shaft  
 [NASA-CASE-NFO-11222] c15 N72-25456  
 Development of mechanical device for measuring distance of point within sphere from surface of sphere  
 [NASA-CASE-XLA-06683] c14 N72-28436  
 Development of thermal compensating structure which maintains uniform length with changes in temperature  
 [NASA-CASE-MFS-20433] c15 N72-28496  
 Development of mating flat surfaces to inhibit leakage of fluid around shafts  
 [NASA-CASE-XLF-10326-2] c15 N72-29488  
 Development of solar energy powered heliotrope assembly to orient solar array toward sun  
 [NASA-CASE-GSC-10945-1] c21 N72-31637  
 Design and construction of mechanical probe for determining if object is properly secured  
 [NASA-CASE-MFS-20760] c14 N72-33377  
 Development and characteristics of rotary actuator for use on spacecraft to deploy and

- support pivotal structures such as solar panels  
[NASA-CASE-NFO-10680] c31 N73-14855
- Collapsible support for antenna reflector  
applied to installation of spacecraft antennas  
[NASA-CASE-NFO-11751] c07 N73-24176
- Pneumatic foot pedal operated fluidic exercising  
device  
[NASA-CASE-MSC-11561-1] c05 N73-32014
- Mechanical exposure interlock device for  
preventing film overexposure in oscilloscope  
camera  
[NASA-CASE-LAR-10319-1] c14 N73-32322
- Reefing system  
[NASA-CASE-LAR-10129-2] c37 N74-20063
- Sprag solenoid brake --- development and  
operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c37 N74-26976
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c44 N74-33379
- Automatic inoculating apparatus --- includes  
movable carriage, drive motor, and swabbing  
motor  
[NASA-CASE-LAR-11074-1] c51 N75-13502
- Clock setter  
[NASA-CASE-LAR-11458-1] c35 N76-16392
- Apparatus for positioning modular components on  
a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c37 N76-21554
- Reel safety brake  
[NASA-CASE-GSC-11960-1] c37 N77-14479
- Mechanical sequencer  
[NASA-CASE-MSC-19536-1] c37 N77-22482
- Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c37 N77-23483
- Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c54 N78-17676
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c15 N78-25119
- Actuator mechanism  
[NASA-CASE-GSC-11883-2] c37 N76-31426
- Mechanical end joint system for structural  
column elements  
[NASA-CASE-LAR-12482-1] c37 N80-22704
- Quartz ball valve  
[NASA-CASE-NFO-14473-1] c37 N80-23654
- Method and apparatus for holding two separate  
metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c37 N80-23655
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c26 N80-28492
- Fire extinguishing apparatus having a slidable  
mass for a penetrator nozzle --- for  
penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c31 N81-14137
- Device for coupling a first vehicle to a second  
vehicle  
[NASA-CASE-GSC-12429-1] c37 N81-14320
- Apparatus for accurately preloading auger  
attachment means for frangible protective  
material  
[NASA-CASE-MSC-18791-1] c37 N81-24446
- Compression test fixture  
[NASA-CASE-MSC-18723-1] c39 N81-24470
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c52 N81-25661
- Clamp-mount device  
[NASA-CASE-MFS-25510-1] c37 N82-11470
- MECHANICAL DRIVES**
- Hydraulic drive mechanism for leveling isolation  
platforms  
[NASA-CASE-XMS-03252] c15 N71-10658
- Antibacklash circuit for hydraulic drive system  
[NASA-CASE-XNP-01020] c03 N71-12260
- Precision stepping drive device using cam disk  
[NASA-CASE-MFS-14772] c15 N71-17692
- Incremental motion drive system applied to  
interferometer components  
[NASA-CASE-XNP-08897] c15 N71-17694
- Ratchet mechanism for high speed operation at  
reduced backlash  
[NASA-CASE-MFS-12805] c15 N71-17805
- Development of apparatus for automatically  
changing carriage speed of welding machine to  
obtain constant speed of torch along work  
surface  
[NASA-CASE-XMF-07069] c15 N71-23815
- Drive system for parabolic tracking antenna with  
reversible motion and minimal backlash  
[NASA-CASE-NFO-10173] c15 N71-24696
- Synchronous dc direct-drive system comprising  
multiple-loop hybrid control system  
controlling load directly connected to actuator  
[NASA-CASE-GSC-10065-1] c10 N71-27136
- Energy absorption device in high precision gear  
train for protection against damage to  
components caused by stop loads  
[NASA-CASE-XNF-01848] c15 N71-28959
- Automatic controlled drive mechanism for  
portable boring bar  
[NASA-CASE-XLA-03661] c15 N71-33518
- Rotary actuator for use in environments with no  
rolling and sliding friction  
[NASA-CASE-NFO-10244] c15 N72-26371
- Development and characteristics of rotary  
actuator for use on spacecraft to deploy and  
support pivotal structures such as solar panels  
[NASA-CASE-NFO-10680] c31 N73-14855
- Optically actuated two position mechanical mover  
[NASA-CASE-NFO-13105-1] c37 N74-21060
- Two speed drive system --- mechanical device for  
changing speed on rotating vehicle wheel  
[NASA-CASE-MFS-20645-1] c37 N74-23070
- Concentric differential gearing arrangement  
[NASA-CASE-ARC-10462-1] c37 N74-27901
- Geneva mechanism --- including star wheel and  
driver  
[NASA-CASE-NFO-13281-1] c37 N75-13266
- Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c37 N77-12402
- Mount for continuously orienting a collector  
dish in a system adapted to perform both  
diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c35 N77-20401
- Hydraulic drain means for servo-systems  
[NASA-CASE-NFO-10316-1] c37 N77-22479
- Mechanical sequencer  
[NASA-CASE-MSC-19536-1] c37 N77-22482
- Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c07 N78-17056
- Wobble gear drive mechanism --- for aerospace  
environments  
[NASA-CASE-WOO-00625] c37 N78-17385
- Toogle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c37 N79-28550
- Antenna deployment mechanism for use with a  
spacecraft --- extensible and retractable  
telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c18 N80-14183
- Redundant motor drive system  
[NASA-CASE-MFS-23771-1] c37 N80-32716
- Belt for transmitting power from a cogged  
driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c37 N80-32717
- Base drive for paralleled inverter systems  
[NASA-CASE-NFO-14163-1] c33 N81-14220
- Speed control device for a heavy duty shaft ---  
solar sails for spacecraft propulsion  
[NASA-CASE-NFO-14170-1] c37 N81-15364
- Variable speed drive  
[NASA-CASE-GSC-12643-1] c37 N81-24447
- MECHANICAL ENGINEERING**
- Manual actuator --- for spacecraft exercising  
machines  
[NASA-CASE-MFS-21481-1] c37 N74-18127
- Shaft seal assembly for high speed and high  
pressure applications  
[NASA-CASE-LEW-11873-1] c37 N79-22475
- MECHANICAL MEASUREMENT**
- Strain gage for detecting and measuring  
mechanical strain in thermally strained  
specimens  
[NASA-CASE-FRC-10053] c14 N70-35587
- Air brake device for absorbing and measuring  
power from rotating shafts  
[NASA-CASE-XLE-00720] c14 N70-40201
- Water cooled gage for strain measurements in  
high temperature environments  
[NASA-CASE-XNF-09205] c14 N71-17657
- Development of apparatus for measuring  
successive increments of strain on elastomers  
[NASA-CASE-XMF-04680] c15 N71-19489
- Development of Hall effect transducer for  
converting mechanical shaft rotations into  
proportional electrical signals  
[NASA-CASE-LAR-10620-1] c09 N72-25255
- Strain gage mounting assembly  
[NASA-CASE-NFO-13170-1] c35 N76-14430

- Pulsed phase locked loop strain monitor  
[NASA-CASE-LAR-12772-1] c33 N81-15195
- Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c39 N81-25400
- MECHANICAL PROPERTIES**  
Test apparatus for determining mechanical properties of refractory materials at high temperatures in vacuum or inert atmospheres  
[NASA-CASE-XLP-00335] c14 N70-35368
- Fixture for environmental exposure of structural materials under compression  
[NASA-CASE-LAR-12602-1] c35 N81-19429
- MECHANICS (PHYSICS)**  
Hovering type flying vehicle design and principle mechanisms for manned or unmanned use  
[NASA-CASE-MSC-12111-1] c02 N71-11039
- MECHANIZATION**  
Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-13731-1] c39 N78-10493
- MEDICAL ELECTRONICS**  
Circuit for detecting initial systolic and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c54 N75-13531
- Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c52 N80-33081
- Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c52 N81-14612
- MEDICAL EQUIPMENT**  
Electromedical garment, applying vectorcardiologic type electrodes to human torsos for data recording during physical activity  
[NASA-CASE-XFR-10856] c05 N71-11189
- Respiration analyzing method and apparatus for determining subjects oxygen consumption in aerospace environments  
[NASA-CASE-XFR-06403] c05 N71-11202
- Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications  
[NASA-CASE-HQN-10541-2] c15 N71-27135
- Zero power telemetry actuated switch for biomedical equipment  
[NASA-CASE-ARC-10105] c09 N72-17153
- Tilting table for testing human body in variety of positions while exercising on ergometer or other biomedical devices  
[NASA-CASE-MFS-21010-1] c05 N73-30078
- Automatic device for assaying urine for bacterial adenosine triphosphate content  
[NASA-CASE-GSC-11169-2] c05 N73-32011
- Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c35 N75-25123
- Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13315-1] c54 N75-27761
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14180-1] c52 N76-14757
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c54 N76-22914
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525
- Corneal seal device  
[NASA-CASE-LEW-12258-1] c52 N77-28716
- Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c52 N77-28717
- Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c52 N78-14773
- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c34 N78-25351
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c52 N80-18690
- Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c52 N81-12724
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c51 N81-14605
- Urine collection device  
[NASA-CASE-MSC-16433-1] c52 N81-24711
- Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c52 N81-25662
- System for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c52 N81-26657
- Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c52 N81-27786
- Low X-ray absorption aneurism clips  
[NASA-CASE-LAR-12650-1] c52 N81-29768
- MELTING POINTS**  
Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c27 N79-33316
- MELTS (CRYSTAL GROWTH)**  
Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c76 N79-23798
- Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c26 N80-23419
- Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-MFC-14298-1] c76 N80-32244
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c33 N81-19389
- Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NFO-14831-1] c76 N81-19944
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c76 N81-30012
- MEMBRANE STRUCTURES**  
Liquid junction for glass electrode or pH meters  
[NASA-CASE-NFO-10682] c15 N70-34699
- Expulsion and measuring device for determining quantity of liquid in tank under conditions of weightlessness  
[NASA-CASE-XMS-01546] c14 N70-40233
- Flexible composite membrane structure impervious to extremely reactive chemicals in rocket propellants  
[NASA-CASE-XNF-08837] c18 N71-16210
- Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747
- Meteoroid capture cell construction  
[NASA-CASE-MSC-12423-1] c91 N76-30131
- Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c27 N80-16163
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c27 N81-24257
- MEMBRANES**  
Apparatus for measuring polymer membrane expansion in electrochemical cells  
[NASA-CASE-XGS-03865] c14 N69-21363
- Separation cell with permeable membranes for fluid mixture component separation  
[NASA-CASE-XMS-02952] c18 N71-20742
- Water insoluble, cationic permselective membrane  
[NASA-CASE-NFO-11091] c18 N72-22567
- Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c44 N79-10513
- Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c25 N79-14169
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c52 N80-14687
- Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-1] c26 N80-19237
- Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c27 N80-23452
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NFO-14001-1] c27 N81-14076
- Asymmetric polyimide separation membrane and method  
[NASA-CASE-NFO-15431-1] c25 N81-29178
- MEMORY**  
Method for making conductors for ferrite memory arrays --- from pre-formed metal conductors  
[NASA-CASE-LAR-10994-1] c24 N75-13032
- MERCURY (METAL)**  
Interrupter switching device utilizing electrodes and mercury filled capillary tubes



- in which current flow vaporizes mercury as circuit breaker  
[NASA-CASE-XNP-02251] c12 N71-20896
- Method of forming ceramic to metal seals impervious to gaseous and liquid mercury at high temperature  
[NASA-CASE-XNP-01263-2] c15 N71-26312
- Development of system for delivering vaporized mercury to electron bombardment ion engine  
[NASA-CASE-NPO-10737] c28 N72-11709
- MERCURY VAPOR**
- Interrupter switching device utilizing electrodes and mercury filled capillary tubes in which current flow vaporizes mercury as circuit breaker  
[NASA-CASE-XNP-02251] c12 N71-20896
- Liquid-vapor interface seal design for turbine rotating shafts including helical and molecular pumps and liquid cooling of mercury vapor  
[NASA-CASE-XNP-02862-1] c15 N71-26294
- METABOLIC WASTES**
- Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721
- Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c51 N80-27067
- METABOLISM**
- Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c25 N75-12686
- Process for control of cell division  
[NASA-CASE-LAR-1C773-3] c51 N77-25769
- Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c52 N79-21750
- METAL BONDING**
- Bonding method for improving contact between lead telluride thermoelectric elements and tungsten electrodes  
[NASA-CASE-XGS-04554] c15 N69-39786
- Plasma spraying gun for forming diffusion bonded metal or ceramic coatings on substrates  
[NASA-CASE-XLE-01604-2] c15 N71-15610
- Describing metal valve pintle with encapsulated elastomeric body  
[NASA-CASE-MSC-12116-1] c15 N71-17648
- Apparatus for determining quality of bond between high density material and low density material  
[NASA-CASE-MPS-13686] c15 N71-18132
- Metal soldering with hydrazine monoperfluoro alkanoate for corrosion resistant coatings  
[NASA-CASE-XNP-03459] c15 N71-21078
- Leak resistant bonded elastomeric seal for secondary electrochemical cells  
[NASA-CASE-XGS-02631] c03 N71-23006
- Metal pattern bonding technique for cover glass attachment to silicon solar cells for space applications  
[NASA-CASE-XLE-06569] c03 N71-23449
- Development of electrical system for indicating optimum contact between electrode and metal surface to permit improved soldering operation  
[NASA-CASE-KSC-10242] c15 N72-23497
- Development of process for bonding resinous body in cavities of honeycomb structures  
[NASA-CASE-MSC-12357] c15 N73-12489
- Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c37 N74-21057
- Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c37 N75-25185
- Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c26 N77-28265
- Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c34 N79-13289
- Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c37 N79-13364
- Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c37 N80-23655
- Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c34 N80-24573
- Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-13359-1] c27 N81-24265
- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c27 N82-11206
- METAL COATINGS**
- Joining aluminum to stainless steel by bonding aluminum coatings onto titanium coated stainless steel and brazing aluminum to aluminum/titanium coated steel  
[NASA-CASE-MPS-07369] c15 N71-20443
- Metal soldering with hydrazine monoperfluoro alkanoate for corrosion resistant coatings  
[NASA-CASE-XNP-03459] c15 N71-21078
- Low concentration alkaline solution treatment of aluminum with metal phosphate surface coatings to improve chemical bonding and reduce coating weight  
[NASA-CASE-XLA-01995] c18 N71-23047
- Organometallic compounds of niobium and tantalum useful for film deposition  
[NASA-CASE-XNP-04023] c06 N71-28808
- Silicide coating process and composition for protection of refractory metals from oxidation  
[NASA-CASE-XLE-10910] c18 N71-29040
- Selective nickel deposition on irradiation sensitive compounds  
[NASA-CASE-LEW-10965-1] c15 N72-25452
- Silicon carbide backward diode with coated lead attachment  
[NASA-CASE-ERC-10224-2] c09 N73-27150
- Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MPS-22562-1] c44 N76-14595
- Ultraviolet light reflective coating  
[NASA-CASE-GSC-11786-1] c24 N76-24363
- Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c35 N77-20400
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c44 N78-25527
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOG-00428-1] c32 N79-19186
- METAL CUTTING**
- Metal shearing energy absorber  
[NASA-CASE-HQN-10638-1] c15 N73-30460
- Vee-notching device --- with adjustable carriage  
[NASA-CASE-MPS-20730-1] c39 N74-13131
- Hole cutter --- drill bits and rotating shaft  
[NASA-CASE-MPS-22649-1] c37 N75-25186
- Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c37 N81-14319
- METAL FATIGUE**
- Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c24 N81-26179
- METAL FIBERS**
- Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c33 N79-12331
- METAL FILMS**
- Means and methods of depositing thin films on substrates  
[NASA-CASE-XNP-00595] c15 N70-34967
- Metallic film diffusion into metal or ceramic surfaces for boundary lubrication in aerospace environments  
[NASA-CASE-XLE-01765] c18 N71-10772
- Bismuth and lead surface coatings for gas bearings in aerospace engineering  
[NASA-CASE-XGS-02011] c15 N71-20739
- Metallic film diffusion for boundary lubrication in aerospace engineering  
[NASA-CASE-XLE-10337] c15 N71-24046
- Magnetic recording head composed of ferrite core coated with thin film of aluminum-iron-silicon alloy  
[NASA-CASE-GSC-10097-1] c08 N71-27210
- Thin absorbing metallic film for increased visible light transmission  
[NASA-CASE-LAR-10836-1] c26 N72-27784
- Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c27 N74-13270
- Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c37 N75-19684
- Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c37 N78-13436



## METAL FINISHING

- Selective plating of etched circuits without removing previous plating  
[NASA-CASE-XGS-03120] c15 N71-24047
- Surface finishing --- for aircraft wings  
[NASA-CASE-MSC-12631-1] c24 N77-28225

## METAL FOILS

- Characteristics of device for folding thin flexible sheets into compact configuration  
[NASA-CASE-XLA-00137] c15 N70-33180
- Passive thermal control coating on aluminum foil laminate for inflatable spacecraft surfaces  
[NASA-CASE-XLA-01291] c33 N70-36617
- Development and characteristics of thermal radiation shielding of refractory metal foil used for induction furnace  
[NASA-CASE-XLE-03432] c33 N71-24145
- Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c44 N74-19692
- Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c35 N76-18400
- Process for preparing high temperature polyimide film laminates  
[NASA-CASE-LAR-12742-1] c24 N81-12174

## METAL PUELS

- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c28 N74-33209

## METAL HALIDES

- Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c37 N76-18458
- High power metallic halide laser  
[NASA-CASE-NPO-14782-1] c36 N80-18381

## METAL HYDRIDES

- Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c37 N78-13436

## METAL IONS

- Chemical synthesis of thermally stable organometallic polymers with divalent metal ion and tetraphenylphosphonitrilic units  
[NASA-CASE-HQN-10364] c06 N71-27363
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c33 N80-24549
- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c27 N82-11206

## METAL JOINTS

- Leakproof soft metal seal for use in very high vacuum systems operating at cryogenic temperatures  
[NASA-CASE-XGS-02441] c15 N70-41629

## METAL MATRIX COMPOSITES

- High strength reinforced metallic composites for applications over wide temperature range  
[NASA-CASE-XLE-02428] c17 N70-33288
- Process for producing dispersion strengthened nickel with aluminum comprising metallic matrices embedded with oxides or other hyperfine compounds  
[NASA-CASE-XLE-06969] c17 N71-24142
- Self lubricating gears and other mechanical parts having surface adapted to frictional contact  
[NASA-CASE-MFS-14971] c15 N71-24984
- Development of procedure for improved distribution of refractory compounds and micro-constituents in refractory metal matrix  
[NASA-CASE-XLE-03940-2] c17 N72-28536
- Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c24 N75-28135
- Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c24 N77-19171
- Fuselage structure using advanced technology metal matrix fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c05 N78-18045
- Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c34 N79-13289
- Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c26 N80-23419
- Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c34 N80-24573

- Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c24 N81-17170
- Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c24 N81-26179

## METAL OXIDE SEMICONDUCTORS

- Gyrator circuit using MOS field effect transistors  
[NASA-CASE-MFS-21433] c09 N73-20232
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c76 N74-20329
- Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c33 N74-34638
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c76 N75-25730
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c44 N78-25527
- Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c76 N79-14906
- Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c33 N81-26360
- Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c44 N81-29525

## METAL OXIDES

- Process for producing dispersion strengthened nickel with aluminum comprising metallic matrices embedded with oxides or other hyperfine compounds  
[NASA-CASE-XLE-06969] c17 N71-24142
- Photofabrication techniques for selective removal of conductive metals oxide coatings from nonconductive substrates  
[NASA-CASE-ERC-10108] c06 N72-21094
- Producing metal powders of controlled particle size by reducing oxide using reactive metal vapor in vacuum  
[NASA-CASE-XLE-06461] c17 N72-22530
- Method for obtaining oxygen from lunar or similar soil  
[NASA-CASE-MSC-12408-1] c46 N74-13011
- Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-1] c26 N80-19237
- Method for depositing an oxide coating --- producing solar panels  
[NASA-CASE-LEW-13131-1] c26 N81-24230
- Method of forming oxide coatings  
[NASA-CASE-LEW-13132-1] c44 N81-27616

## METAL PARTICLES

- Magnetohydrodynamic generator for mixing nonconductive gas and liquid metal mist to form slugs  
[NASA-CASE-XLE-02083] c03 N69-39983
- Cermet for nuclear fuel constructed by pressing metal coated ceramic particles in die at temperature to cause bonding of metal coatings, and tested for thermal stability  
[NASA-CASE-LEW-10219-1] c18 N71-28729
- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NFO-11975-1] c28 N74-33209

## METAL PLATES

- Development of large area micrometeoroid impact detector panels  
[NASA-CASE-XLA-05906] c31 N71-16221
- Tungsten-coated tungsten-uranium dioxide nuclear fuel plates  
[NASA-CASE-XLE-00209] c22 N73-32528
- Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c27 N76-14264
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c26 N80-28492

## METAL POWDER

- Production of refractory bodies with controlled porosity by pressing and heating mixtures of refractory and inert metal powders  
[NASA-CASE-LEW-10393-1] c17 N71-15468
- Electrode sealing and insulation for fuel cells containing caustic liquid electrolytes using powdered plastic and metal  
[NASA-CASE-XMS-01625] c15 N71-23022

- Apparatus for mechanically dispersing ultrafine metal powders subjected to shock waves  
[NASA-CASE-XLE-04946] c17 N71-24911
- Method to produce high purity copper fluoride by heating copper hydroxyfluoride powder and subjecting to flowing fluorine gas  
[NASA-CASE-LEW-10794-1] c06 N72-17093
- Producing metal powders of controlled particle size by reducing oxide using reactive metal vapor in vacuum  
[NASA-CASE-XLE-06461] c17 N72-22530
- Development of apparatus for producing metal powder particles of controlled size  
[NASA-CASE-XLE-06461-2] c17 N72-28535
- Metal plating process employing spraying of metallic powder/peening particle mixture  
[NASA-CASE-GSC-11163-1] c15 N73-32360
- METAL SHEETS**
- Fatigue testing apparatus with light shield and infrared reflector for high temperature evaluation of loaded sheet samples  
[NASA-CASE-XLA-01782] c14 N71-26136
- Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c37 N74-11301
- Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c37 N75-12326
- Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c37 N75-26371
- Apparatus for welding sheet material --- butt joints  
[NASA-CASE-XMS-01330] c37 N75-27376
- METAL SPINNING**
- Apparatus and method for spin forming tubular elbows with high strength, uniform thickness, and close tolerances  
[NASA-CASE-XMF-01083] c15 N71-22723
- METAL STRIPS**
- Metal ribbon wrapped outer wall for regeneratively cooled combustion chamber  
[NASA-CASE-XLE-00164] c15 N70-36411
- Metal strip mounting arrangement for solar cell arrays on spacecraft  
[NASA-CASE-XGS-01475] c03 N71-11058
- Forming tubes from long thin flat metal strips  
[NASA-CASE-XGS-04175] c15 N71-18579
- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c70 N74-21300
- METAL SURFACES**
- Condenser-separator for dehumidifying air utilizing sintered metal surface  
[NASA-CASE-XLA-08645] c15 N69-21465
- Nickel plating onto etched aluminum castings  
[NASA-CASE-XNP-04148] c17 N71-24830
- High thermal emittance black surface coatings and process for applying to metal and metal alloy surfaces used in radiative cooling of spacecraft  
[NASA-CASE-XLA-06199] c15 N71-24875
- Method for treating metal surfaces to prevent secondary electron transmission  
[NASA-CASE-XNP-05469] c24 N71-25555
- Method of forming ceramic to metal seals impervious to gaseous and liquid mercury at high temperature  
[NASA-CASE-XNP-01263-2] c15 N71-26312
- Anodizing method for providing metal surfaces with temperature reducing coatings against flames  
[NASA-CASE-XLE-00035] c33 N71-29151
- Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NPO-10617-1] c35 N74-22095
- Surface finishing  
[NASA-CASE-MSC-12631-3] c27 N81-14077
- Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c26 N81-16209
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N81-19455
- Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c26 N81-25188
- METAL VAPOR LASERS**
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NFO-15021-1] c36 N80-20574
- METAL VAPORS**
- Magnetohydrodynamic generator for mixing nonconductive gas and liquid metal mist to form slugs  
[NASA-CASE-XLE-02083] c03 N69-39983
- Apparatus for producing hydrocarbon slurry containing small particles of magnesium for use as jet aircraft fuel  
[NASA-CASE-XLE-00010] c15 N70-33382
- Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c36 N75-32441
- Isotope separation using metallic vapor lasers  
[NASA-CASE-NFO-13550-1] c36 N77-26477
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c36 N80-20574
- METAL WORKING**
- Controlled arc spot welding method  
[NASA-CASE-XMF-00392] c15 N70-34814
- Method and apparatus for shaping and joining large diameter metal tubes using magnetomotive forces  
[NASA-CASE-XMF-05114] c15 N71-17650
- Description of protective device for providing safe operating conditions around work piece in machine or metal working tool  
[NASA-CASE-XLF-01092] c15 N71-22797
- Description of portable milling tool for milling tube or pipe ends to desired shape and thickness  
[NASA-CASE-XMF-03511] c15 N71-22799
- Development and characteristics of frusto-conical die nib for extrusion of refractory metals  
[NASA-CASE-XLE-06773] c15 N71-23817
- Portable magnetomotive hammer for metal working  
[NASA-CASE-XMF-03793] c15 N71-24833
- Method and apparatus for portable high precision magnetomotive bulging, constricting, and joining of large diameter metal tubes  
[NASA-CASE-XMF-05114-3] c15 N71-24865
- Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c37 N74-25968
- Apparatus for forming dish ion thruster grids  
[NASA-CASE-LEW-11694-2] c37 N76-14461
- Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c37 N81-16470
- METAL-METAL BONDING**
- Joining aluminum to stainless steel by bonding aluminum coatings onto titanium coated stainless steel and brazing aluminum to aluminum/titanium coated steel  
[NASA-CASE-MFS-07369] c15 N71-20443
- Method for honeycomb panel bonding by thermosetting film adhesive with electrical heat means  
[NASA-CASE-XMF-01402] c18 N71-21651
- Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c37 N76-27568
- Mechanical bonding of metal  
[NASA-CASE-LEW-12941-1] c31 N81-16329
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N81-19455
- METALLIZING**
- Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c76 N79-14906
- METALLOGRAPHY**
- Development of method for etching copper  
[NASA-CASE-XGS-06306] c17 N71-16044
- METALLOSILOXANE POLYMER**
- Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c37 N74-21058
- METALLURGY**
- Induction heating of metallurgical specimens to high temperatures in coil furnace  
[NASA-CASE-XLE-04026] c14 N71-23267
- Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c26 N80-14229
- METALS**
- Transpiration cooled turbine blade made from metallic or ceramic wires  
[NASA-CASE-XLE-00020] c15 N70-33226

- Self lubricating fluoride-metal composite materials for outer space applications  
[NASA-CASE-XLE-08511] c18 N71-23710
- Punch and die device for forming convolution series in thin gage metal hemispheres  
[NASA-CASE-XNP-05297] c15 N71-23811
- Device for bending metal ribbon or wire  
[NASA-CASE-XLA-05966] c15 N72-12408
- Metal plating process employing spraying of metallic powder/peening particle mixture  
[NASA-CASE-GSC-11163-1] c15 N73-32360
- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c37 N74-21063
- Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c31 N74-23065
- Production of pure metals  
[NASA-CASE-LEW-10906-1] c25 N74-30502
- Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c35 N76-15434
- Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c37 N77-23482
- Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c44 N79-11467
- METASTABLE STATE**
- Stabilization of He<sub>2</sub>(a 3 Sigma u<sup>+</sup> molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c72 N79-13826
- METEORITE COLLISIONS**
- Pressurized panel meteoroid detector  
[NASA-CASE-XLA-08916-2] c14 N73-28487
- Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
[NASA-CASE-NPO-12127-1] c91 N74-13130
- METEORITES**
- Method for making pressurized meteoroid penetration detector panels  
[NASA-CASE-XLA-08916] c15 N71-29018
- METEORITIC DAMAGE**
- Capacitor sandwich structure containing metal sheets of known thickness for counting penetration rates of meteoroids  
[NASA-CASE-XLE-01246] c14 N71-10797
- METEOROID HAZARDS**
- Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c35 N75-33367
- METEOROID PROTECTION**
- Development and characteristics of protective coatings for spacecraft  
[NASA-CASE-XNP-02507] c31 N71-17679
- METEOROLIDS**
- Cameras for photographing meteors in selected sky area  
[NASA-CASE-LAR-10226-1] c14 N73-19419
- Meteoroid capture cell construction  
[NASA-CASE-MSC-12423-1] c91 N76-30131
- METEOROLOGICAL BALLOONS**
- Aerodynamically stable meteorological balloon using surface roughness effect  
[NASA-CASE-XMF-04163] c02 N71-23007
- METHANE**
- High temperature gas lubricant consisting of two fluoro-bromo-methanes  
[NASA-CASE-XLE-00353] c18 N70-35897
- METHYL ALCOHOLS**
- Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c28 N82-12241
- MICHELSON INTERFEROMETERS**
- Michelson interferometer with photodetector for optical direction sensing  
[NASA-CASE-NPO-10320] c14 N71-17655
- Servo system for retroreflector of Michelson interferometer  
[NASA-CASE-NPO-10300] c14 N71-17662
- Computerized optical system for producing multiple images of a scene simultaneously  
[NASA-CASE-MSC-12404-1] c23 N73-13661
- Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c35 N78-18391
- MICROANALYSIS**
- Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c74 N78-33913
- MICROBALANCES**
- Null-type vacuum microbalance for measuring minute mechanical displacements  
[NASA-CASE-XAC-00472] c15 N70-40180
- Microbalance --- for measuring particle mass  
[NASA-CASE-MSC-11242] c35 N78-17358
- MICROBALLS**
- Method of forming frozen spheres in a force-free drop tower --- microballoons for inertial confinement fusion  
[NASA-CASE-NPO-14845-1] c31 N81-16328
- MICROBIOLOGY**
- Development of variable angle device for positioning test tubes to permit optimum drying of culture medium  
[NASA-CASE-LAR-10507-1] c11 N72-25284
- Apparatus for microbiological sampling --- including automatic swabbing  
[NASA-CASE-LAR-11069-1] c35 N75-12272
- Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
[NASA-CASE-LAR-11074-1] c51 N75-13502
- Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c35 N75-27330
- Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c51 N77-22794
- Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c25 N79-24073
- Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c51 N81-28698
- MICROCHANNELS**
- Low intensity X-ray and gamma-ray imaging spectrometer  
[NASA-CASE-GSC-12587-1] c35 N80-29635
- MICROCRACKS**
- System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c39 N80-10507
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190
- MICROELECTRONICS**
- Separation of semiconductor wafer into chips bounded by scribe lines  
[NASA-CASE-ERC-10138] c26 N71-14354
- Vibrophonocardiograph comprising low weight and small volume piezoelectric microphone with amplifier having high input impedance for high sensitivity and low frequency response  
[NASA-CASE-XFR-07172] c05 N71-27234
- Electrical connections for thin film hybrid microcircuits  
[NASA-CASE-XMS-02182] c10 N71-28783
- Method for coating through-holes in ceramic substrates used in fabricating miniaturized electronic circuits  
[NASA-CASE-XMF-05999] c15 N71-29032
- Precision surface cutter for screen circuit negatives and other microcircuits  
[NASA-CASE-XLA-09843] c15 N72-27485
- Material compositions and processes for developing dielectric thick films used in microcircuit capacitors  
[NASA-CASE-LAR-10294-1] c26 N72-28762
- Active tuned circuits for microelectronic construction  
[NASA-CASE-GSC-11340-1] c10 N72-33230
- Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c38 N78-17396
- Inductorless narrow-band filter/amplifier  
[NASA-CASE-GSC-12410-1] c33 N79-24260
- Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c44 N81-14389
- High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529
- MICROFIBERS**
- Small conductive particle sensor --- microfiber size determination  
[NASA-CASE-LAR-12552-1] c35 N82-11431
- MICROFILMS**
- Apparatus for semiautomatic inspection of microfilmed documents for density, resolution, size, and position

- [NASA-CASE-MFS-20240] c14 N71-26788
- MICROINSTRUMENTATION**
- Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c37 N78-17386
- MICROMETEORITES**
- Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
[NASA-CASE-NPO-12127-1] c91 N74-13130
- Micrometeoroid velocity and trajectory analyzer  
[NASA-CASE-GSC-11892-1] c35 N76-15433
- MICROMETEORIDS**
- Particle detector for measuring micrometeoroid velocity in space  
[NASA-CASE-XLA-00495] c14 N70-41332
- Piezoelectric transducer for detecting and measuring micrometeoroids  
[NASA-CASE-XAC-01101] c14 N70-41957
- Pressurized cell micrometeoroid detector  
[NASA-CASE-XLA-00936] c14 N71-14996
- Development of large area micrometeoroid impact detector panels  
[NASA-CASE-XLA-05906] c31 N71-16221
- Rotary bead dropper and selector for testing micrometeorite transducers  
[NASA-CASE-XGS-03304] c09 N71-22988
- Measuring micrometeoroid depth of penetration into various materials  
[NASA-CASE-XLA-06941] c14 N71-23240
- Structure of fabric layers for micrometeoroid protection garment with capability for eliminating heat shorts for use in manufacturing space suits  
[NASA-CASE-MSC-12109] c18 N71-26285
- Micrometeoroid analyzer using arrays of interconnected capacitors and ion detector  
[NASA-CASE-ARC-10443-1] c14 N73-20477
- Cold cathode discharge tube with pressurized gas cell for meteoroid detection in space  
[NASA-CASE-LAR-10483-1] c14 N73-32327
- Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c35 N74-21062
- Semiconductor projectile impact detector  
[NASA-CASE-MFS-23008-1] c35 N78-18390
- MICROMETERS**
- Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c37 N78-17386
- MICROMINIATURIZATION**
- Miniaturized radiometer for detecting low level thermal radiation  
[NASA-CASE-XLA-04556] c14 N69-27484
- MICROORGANISMS**
- Development of bacteriostatic conformal coating and methods of application  
[NASA-CASE-GSC-10007] c18 N71-16046
- Portable vacuum probe surface sampler for sampling large surface areas with relatively light loading densities of microorganisms  
[NASA-CASE-LAR-10623-1] c14 N73-30395
- Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c35 N75-33368
- Biocontamination and particulate detection system  
[NASA-CASE-NPO-13953-1] c35 N79-28527
- Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c51 N81-28698
- Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c51 N81-29727
- MICROPARTICLES**
- Micropacked column for rapid chromatographic analysis using low gas flow rates  
[NASA-CASE-XNP-04816] c06 N69-39936
- MICROPHONES**
- Audio signal processing system for noise surge elimination at low amplitude audio input  
[NASA-CASE-MSC-12223-1] c07 N71-26181
- Vibrophonocardiograph comprising low weight and small volume piezoelectric microphone with amplifier having high input impedance for high sensitivity and low frequency response  
[NASA-CASE-XFR-07172] c05 N71-27234
- Development of wind tunnel microphone structure to minimize effects of vibrations and eliminate unwanted signals in microphone output  
[NASA-CASE-XNP-00250] c11 N71-28779
- High-temperature microphone system --- for measuring pressure fluctuations in gases at high temperature  
[NASA-CASE-LAR-12375-1] c32 N79-24203
- MICROPROCESSORS**
- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411
- Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NPO-15295-1] c60 N82-11785
- MICROSCOPES**
- Absolute focus locking device for microscopes to maintain set focus for extended time period  
[NASA-CASE-LAR-10184] c14 N72-22445
- Hand-held, lightweight, portable photomicroscope  
[NASA-CASE-ARC-10468-1] c14 N73-33361
- MICROSTRIP TRANSMISSION LINES**
- Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NFO-13886-1] c32 N78-24391
- Multiple band circularly polarized microstrip antenna  
[NASA-CASE-MSC-18334-1] c32 N80-32604
- Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-16606-1] c32 N82-11336
- MICROSTRUCTURE**
- Production of high strength refractory compounds and microconstituents into refractory metal matrix  
[NASA-CASE-XLF-03940] c18 N71-26153
- Development of procedure for improved distribution of refractory compounds and micro-constituents in refractory metal matrix  
[NASA-CASE-XLF-03940-2] c17 N72-26536
- Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c37 N74-21055
- Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c37 N75-26372
- Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c26 N80-23419
- MICROTHRUST**
- Electrostatic microthrust propulsion system with annular slit colloid thruster  
[NASA-CASE-GSC-10709-1] c28 N71-25213
- Heated porous plug microthruster for spacecraft reaction jet controlled systems such as fuel flow regulation, propellant disassociation, and heat transfer augmentation  
[NASA-CASE-GSC-10640-1] c28 N72-18766
- MICROWAVE AMPLIFIERS**
- Thermally sensitive tuning probe for nullifying detuning effects in microwave cavity resonator of amplifier  
[NASA-CASE-XNP-00449] c14 N70-35220
- Maser amplifier slow wave structure --- detecting weak signals from spacecraft  
[NASA-CASE-NFO-15211-1] c36 N81-24425
- Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c36 N81-24426
- MICROWAVE ANTENNAS**
- Microwave power receiving antenna solving heat dissipation problems by construction of elements as heat pipe devices  
[NASA-CASE-MFS-20333] c09 N71-13486
- Development and characteristics of low-noise multimode monopulse antenna feed system for use with microwave communication equipment  
[NASA-CASE-XNP-01735] c07 N71-22750
- Microwave omnidirectional antenna for use on spacecraft  
[NASA-CASE-XLA-03114] c09 N71-22888
- Portable equipment for validating C band launch pad antennas and transmission lines used for spacecraft checkout  
[NASA-CASE-XKS-10543] c07 N71-26292
- Multipurpose microwave antenna, employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPC-11264] c07 N72-25174
- Omnidirectional antenna array with circumferential slots for mounting on

- cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c09 N72-25247
- Characteristics of microwave antenna with  
conical reflectors to generate plane wave front  
[NASA-CASE-NFO-11661] c07 N73-14130
- Thin conformal antenna array for microwave power  
conversions  
[NASA-CASE-NPO-13886-1] c32 N78-24391
- Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c32 N82-11336
- MICROWAVE CIRCUITS**  
Quasi-optical microwave circuit with dielectric  
body for use with oversize waveguides  
[NASA-CASE-ERC-10011] c07 N71-29065
- Microwave integrated circuit for Josephson  
voltage standards  
[NASA-CASE-MFS-23845-1] c33 N81-17348
- MICROWAVE COUPLING**  
Microwave waveguide switch with rotor position  
control  
[NASA-CASE-XNP-06507] c09 N71-23548
- MICROWAVE EQUIPMENT**  
Apparatus for generating microwave signals at  
progressively related phase angles for driving  
antenna array  
[NASA-CASE-ERC-16046] c10 N71-18722
- Broadband microwave waveguide window to  
compensate dielectric material filling  
[NASA-CASE-XNP-08880] c09 N71-24808
- Dual frequency feed systems for Cassegrainian  
antennas  
[NASA-CASE-NPO-13091-1] c09 N73-12214
- Resonant waveguide stark cell --- using  
microwave spectrometers  
[NASA-CASE-LAR-11352-1] c33 N75-26245
- Refrigerated coaxial coupling --- for microwave  
equipment  
[NASA-CASE-NPO-13504-1] c33 N75-30430
- Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c33 N79-28416
- Unequal split microwave power divider  
[NASA-CASE-LAR-12889-1] c33 N81-31483
- MICROWAVE FILTERS**  
Microwave power divider for providing variable  
output power to output waveguide in fixed  
waveguide system  
[NASA-CASE-NFO-11031] c07 N71-33606
- Selective bandpass resonators using bandstop  
resonator pairs for microwave frequency  
operation  
[NASA-CASE-GSC-10990-1] c09 N73-26195
- MICROWAVE FREQUENCIES**  
Varactor microwave frequency mixing circuit  
[NASA-CASE-XGS-02171] c09 N69-24324
- Voltage tunable Gunn effect semiconductor for  
microwave generation  
[NASA-CASE-XER-07894] c09 N71-18721
- Multimode antenna feed system for microwave and  
broadband communication  
[NASA-CASE-GSC-11046-1] c07 N73-28013
- MICROWAVE OSCILLATORS**  
Microwave generator using Gunn effect for  
magnetic tuning  
[NASA-CASE-NPO-12106] c09 N73-15235
- Electron beam controller --- using magnetic  
field to refocus spent electron beam in  
microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c33 N74-10195
- MICROWAVE RADIOMETERS**  
Input radio frequency circuit for switching type  
absolute temperature measuring radiometer for  
noise sources  
[NASA-CASE-ERC-11020] c14 N71-26774
- Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c32 N80-14281
- CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c47 N81-16677
- Microwave limb sounder --- measuring trace gases  
in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c46 N82-12685
- MICROWAVE REFLECTOMETERS**  
Reflectometer for receiver input impedance match  
measurement  
[NASA-CASE-XNP-10843] c07 N71-11267
- Surface defect detection by reflected microwave  
radiation pattern  
[NASA-CASE-ARC-10009-1] c15 N71-17822
- MICROWAVE RESONANCE**  
Microwave double resonance spectroscopy  
absorption cell for gas analysis  
[NASA-CASE-LAR-10305] c14 N71-26137
- MICROWAVE SWITCHING**  
Design of gyrator circuit using operational  
amplifiers to replace ungrounded inductors  
[NASA-CASE-XAC-10608-1] c09 N71-12517
- MICROWAVE TRANSMISSION**  
Microwave power converter  
[NASA-CASE-NPC-14068-1] c44 N78-19609
- Frequency translating phase conjugation circuit  
for active retrodirective antenna array ---  
microwave transmission  
[NASA-CASE-NPO-14536-1] c32 N81-14185
- Solar power satellite system  
[NASA-CASE-HCN-10949-1] c44 N81-16530
- Doppler radar having phase modulation of both  
transmitted and reflected return signals ---  
range-finding  
[NASA-CASE-MSC-18675-1] c32 N81-29312
- Waveguide cooling system  
[NASA-CASE-NFO-15401-1] c33 N81-29344
- MICROWAVE TUBES**  
Electrostatic charged particle collector  
containing stacked electrodes for microwave tube  
[NASA-CASE-LEW-11192-1] c09 N73-13208
- MICROWAVES**  
Radio frequency noise generator having microwave  
slow-wave structure in gas discharge plasma  
[NASA-CASE-XER-11019] c09 N71-23598
- Method and apparatus for optically modulating  
light or microwave beam  
[NASA-CASE-GSC-10216-1] c23 N71-26722
- Microwave waveguide mixer  
[NASA-CASE-ERC-10179] c07 N72-20141
- Microwave power transmission system wherein  
level of transmitted power is controlled by  
reflections from receiver  
[NASA-CASE-MFS-21470-1] c44 N74-19870
- Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c33 N78-32340
- Microwave power transmission beam safety system  
[NASA-CASE-NFO-14224-1] c33 N80-18287
- MIDAIR COLLISIONS**  
Development and characteristics of electronic  
signalling system and data processing  
equipment for warning systems to avoid midair  
collisions between aircraft  
[NASA-CASE-LAR-10717-1] c21 N73-30641
- MILLIMETER WAVES**  
Millimeter wave antenna system for spacecraft use  
[NASA-CASE-GSC-10949-1] c07 N71-28965
- Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c33 N74-32660
- MILLING (MACHINING)**  
Rotary spindle lathe attachments for machining  
geometrical cones  
[NASA-CASE-XMS-04292] c15 N71-22722
- Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c37 N80-29705
- Method and tool for machining a transverse slot  
about a bore  
[NASA-CASE-LAR-11855-1] c37 N81-14319
- MILLING MACHINES**  
Electro-optical system for maintaining two-axis  
alignment during milling operations on large  
tank-sections  
[NASA-CASE-XMF-00908] c14 N70-40238
- Description of portable milling tool for milling  
tube or pipe ends to desired shape and thickness  
[NASA-CASE-XMF-03511] c15 N71-22799
- Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c37 N74-27905
- MINERAL DEPOSITS**  
Underground mineral extraction  
[NASA-CASE-NFO-14140-1] c31 N78-24387
- Underground mineral extraction  
[NASA-CASE-NFO-14140-1] c43 N81-26509
- MINERAL METABOLISM**  
Method and system for in vivo measurement of  
bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c52 N77-14737
- MINIATURE ELECTRONIC EQUIPMENT**  
Miniature solid state, direction sensitive,  
stress transducer design with bonded  
semiconductive piezoresistive element for  
sensing residual stresses  
[NASA-CASE-XNP-02983] c14 N71-21091
- Transducer circuit design with single coaxial  
cable for input and output connections

- including incorporation into miniaturized catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597
- Solid state television camera system consisting of monolithic semiconductor mosaic sensor and molecular digital readout systems  
[NASA-CASE-XMF-06092] c07 N71-24612
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c52 N76-29694
- Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c35 N77-14407
- MINIATURIZATION**
- Miniature vibration isolator utilizing elastic tubing material  
[NASA-CASE-XLA-01019] c15 N70-40156
- Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits  
[NASA-CASE-XNP-01753] c08 N71-22897
- Fast response miniature carbon dioxide detector with no moving parts for measuring concentration in any atmosphere  
[NASA-CASE-MSC-13332-1] c14 N72-21408
- Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c35 N78-32397
- Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c72 N80-27163
- MINING**
- Underground mineral extraction  
[NASA-CASE-NFO-14140-1] c31 N78-24387
- Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c43 N80-14423
- Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c43 N80-23711
- Underground mineral extraction  
[NASA-CASE-NFO-14140-1] c43 N81-26509
- MIRRORS**
- Pneumatic control of telescopic mirror support system  
[NASA-CASE-XLA-03271] c11 N69-24321
- Oscillatory electromagnetic mirror drive system for horizon scanners  
[NASA-CASE-XLA-03724] c14 N69-27461
- Servo system for retroreflector of Michelson interferometer  
[NASA-CASE-NPO-10300] c14 N71-17662
- Gas laser frequency stabilized by position of mirrors in resonant cavity  
[NASA-CASE-XGS-03644] c16 N71-18614
- Highly stable optical mirror assembly optimizing image quality of light diffraction patterns  
[NASA-CASE-ERC-10001] c23 N71-24668
- Adjustable rigid mount for trihedral mirror formed of alloy with small coefficient of thermal expansion supporting screws and spring-biased plates  
[NASA-CASE-XNP-08907] c23 N71-29123
- Optical range finder using reflective first surfaces mirror and transmitting beam splitter  
[NASA-CASE-MSC-12105-1] c14 N72-21409
- Optical mirror support system  
[NASA-CASE-XER-07896-2] c23 N72-22673
- Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c35 N75-12273
- Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c12 N76-15189
- Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c74 N78-15880
- Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c35 N78-18391
- Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c89 N79-10969
- MIS (SEMICONDUCTORS)**
- Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c33 N80-28635
- MISSILE CONTROL**
- Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c32 N74-20864
- MISSILE LAUNCHERS**
- Launch pad missile release system with bending moment change rate reduction in thrust distribution structure at liftoff  
[NASA-CASE-XMF-03198] c30 N70-40353
- Optical monitor panel consisting of translucent screen with test or meter information projected onto it from rear for application in control rooms of missile launching and tracking stations  
[NASA-CASE-XKS-03509] c14 N71-23175
- Controlled release device for use in launching rockets or missiles  
[NASA-CASE-XKS-03338] c15 N71-24043
- MISSILES**
- Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c15 N78-32168
- Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c15 N79-26100
- MITOSIS**
- Process for control of cell division  
[NASA-CASE-LAR-10773-3] c51 N77-25769
- MIXERS**
- Variable mixer propulsion cycle  
[NASA-CASE-LEN-12917-1] c07 N78-18067
- MIXING CIRCUITS**
- Varactor microwave frequency mixing circuit  
[NASA-CASE-XGS-02171] c09 N69-24324
- Microwave waveguide mixer  
[NASA-CASE-ERC-10179] c07 N72-20141
- MIXTURES**
- Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c35 N78-12390
- MOBILITY**
- Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HCN-10069] c33 N75-27251
- Mobile sampler for use in acquiring samples of terrestrial atmospheric gasses  
[NASA-CASE-NFC-15220-1] c35 N81-24414
- MODE TRANSFORMERS**
- Silicon controlled rectifier inverter with compensation of transients to avoid false gating  
[NASA-CASE-XLA-08507] c09 N69-39984
- Dual waveguide mode source for controlling amplitudes of two modes  
[NASA-CASE-XNP-03134] c07 N71-10676
- Direct current transformer  
[NASA-CASE-MFS-23659-1] c33 N79-17133
- MODEMS**
- Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c33 N77-21314
- MODULATION**
- Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c33 N74-17930
- Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c35 N82-15381
- MODULATORS**
- Fabry-Perot interferometer retrodirective reflector modulator for optical communication  
[NASA-CASE-XGS-04480] c16 N69-27491
- Optical retrodirective modulator with focus spoiling reflector driven by modulation signal  
[NASA-CASE-GSC-10062] c14 N71-15605
- Calibrator for measuring and modulating or demodulating laser outputs  
[NASA-CASE-XLA-03410] c16 N71-25914
- Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c33 N74-14939
- Charge storage diode modulators and demodulators  
[NASA-CASE-NFC-10189-1] c33 N77-21314
- Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c36 N80-24602
- Solar energy modulator  
[NASA-CASE-NPO-15388-1] c44 N82-10496
- MODULES**
- Biorthogonal encoder with modular design  
[NASA-CASE-NPO-10629] c08 N72-18184
- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c44 N79-19447
- Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c44 N80-18550
- MODULUS OF ELASTICITY**
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEN-13268-1] c37 N80-24619

**MOISTURE**

Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove  
[NASA-CASE-XLE-02531] c05 N71-23080

**MOISTURE METERS**

Method of evaluating moisture barrier properties of materials used in electronics encapsulation  
[NASA-CASE-NPO-10051] c16 N71-24934

**MOLDING MATERIALS**

Vacuum method for molding thermosetting compounds used as ablative materials  
[NASA-CASE-XLA-01091] c15 N71-10672

Method of making molded electric connector for use with flat conductor cables  
[NASA-CASE-XMF-03498] c15 N71-15986

Hydraulic apparatus for casting and molding of liquid polymers  
[NASA-CASE-XNP-07659] c06 N71-22975

Cold metal hydroforming techniques using epoxy molds for counteracting creep or stretch  
[NASA-CASE-XLE-05641-1] c15 N71-26346

Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c31 N74-13177

Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c31 N74-14133

Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275

Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c20 N79-21123

**MOLDS**

Forming mold for polishing and machining curved solar magnesium reflector with reinforcing ribs  
[NASA-CASE-XLE-08917-2] c15 N71-24836

Using molds for fabricating individual fluid circuit components  
[NASA-CASE-XLA-07829] c15 N72-16329

Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c31 N74-14133

Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c31 N74-32920

Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c31 N75-13111

Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c37 N76-23570

**MOLECULAR BEAMS**

Selector mechanism for mechanical separation and discrimination of high velocity molecular particles  
[NASA-CASE-XLE-01533] c11 N71-10777

Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c20 N74-31269

**MOLECULAR CHAINS**

Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c27 N81-15104

**MOLECULAR GASES**

Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c35 N74-15127

**MOLECULAR PUMPS**

Omnidirectional anisotropic molecular trap, used with vacuum pump to simulate space environments for testing spacecraft components  
[NASA-CASE-XGS-00783] c30 N71-17788

Liquid-vapor interface seal design for turbine rotating shafts including helical and molecular pumps and liquid cooling of mercury vapor  
[NASA-CASE-XNP-02862-1] c15 N71-26294

**MOLECULAR RELAXATION**

Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c74 N81-17887

**MOLECULAR ROTATION**

Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c36 N75-31426

**MOLECULAR SPECTROSCOPY**

Microwave double resonance spectroscopy absorption cell for gas analysis  
[NASA-CASE-LAR-10305] c14 N71-26137

**MOLECULES**

Stabilization of He<sub>2</sub>(a 3 Sigma u<sup>+</sup>) molecules in liquid helium by optical pumping for vacuum UV laser  
[NASA-CASE-NFO-13993-1] c72 N79-13826

**MOLTEN SALT ELECTROLYTES**

Operation method for combined electrolysis device and fuel cell using molten salt to produce power by thermoelectric regeneration mechanism  
[NASA-CASE-XLE-01645] c03 N71-20904

Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c44 N76-18643

**MOLTEN SALTS**

Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NFO-14315-1] c27 N81-17261

**MOLYBDENUM**

Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c35 N79-14346

**MOLYBDENUM CARBIDES**

Flame or plasma spraying for molybdenum coating of carbon or graphite surfaces to prevent oxidative corrosion  
[NASA-CASE-XLA-00302] c15 N71-16077

**MOLYBDENUM DISULFIDES**

Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c28 N81-14103

**MOMENTS OF INERTIA**

Test fixture for measuring moment of inertia of irregularly shaped body with multiple axes  
[NASA-CASE-XGS-01023] c14 N71-22992

**MOMENTUM**

Utilization of momentum devices for forming attitude control and damping system for spacecraft  
[NASA-CASE-XLA-02551] c21 N71-21708

Momentum-velocity analyzer for measuring minute space particles  
[NASA-CASE-XNS-04201] c14 N71-22990

**MONATOMIC GASES**

Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c28 N80-20402

**MONITORS**

Fluid leakage detection system with automatic monitoring capability  
[NASA-CASE-LAR-10323-1] c12 N71-17573

Monitoring circuit design for sampling circuit control and reduction of time-bandwidth in video communication systems  
[NASA-CASE-XNP-02791] c07 N71-23026

Optical monitor panel consisting of translucent screen with test or meter information projected onto it from rear for application in control rooms of missile launching and tracking stations  
[NASA-CASE-XKS-03509] c14 N71-23175

Peak polarity selector for monitoring waveforms  
[NASA-CASE-FRC-10010] c10 N71-24862

Circuit for monitoring power supply by ripple current indication  
[NASA-CASE-KSC-10162] c09 N72-11225

Development of droplet monitoring probe for use in analysis of droplet propagation in mixed-phase fluid stream  
[NASA-CASE-NPO-10985] c14 N73-20478

Monitoring and recording lightning strokes in predetermined area  
[NASA-CASE-KSC-10728-1] c14 N73-32319

Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c74 N74-21304

Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315

Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193

Intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ABC-11317-1] c35 N81-19430

Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c51 N81-28698

**MONOCHROMATIC RADIATION**

Apparatus for producing monochromatic light from continuous plasma source

- [NASA-CASE-XNP-04167-2] c25 N72-24753  
 Laser extensometer  
 [NASA-CASE-MFS-19259-1] c36 N78-14380  
 Multiprism collimator  
 [NASA-CASE-GSC-12608-1] c35 N81-12387
- MONOCHROMATORS**  
 Analytical photoionization mass spectrometer with argon gas filter between light source and monochromator  
 [NASA-CASE-LAR-10180-1] c06 N71-13461  
 Color television system for allowing monochrome television camera to produce color pictures  
 [NASA-CASE-MS-12146-1] c07 N72-17109
- MONOMERS**  
 Pressure transducer --- using a monomeric charge transfer complex sensor  
 [NASA-CASE-NFO-11150] c35 N78-17359  
 Bifunctional monomers having terminal oxime and cyano or amidine groups  
 [NASA-CASE-ARC-11253-3] c27 N81-24256  
 Cross-linked polyvinyl alcohol and method of making same  
 [NASA-CASE-LEW-13101-2] c23 N81-29160  
 Phosphorus-containing imide resins  
 [NASA-CASE-ARC-11368-1] c27 N81-31364
- MONOPOLE ANTENNAS**  
 Monopole antenna system for maximum omnidirectional efficiency for use on satellites  
 [NASA-CASE-XLA-00414] c07 N70-38200  
 Flexible monopole antenna with broad bandwidth and low voltage standing wave ratio  
 [NASA-CASE-MS-12101] c09 N71-18720
- MONOPROPELLANTS**  
 Ignition system for monopropellant combustion devices  
 [NASA-CASE-XNP-00249] c28 N70-38249  
 Catalyst bed ignition system for hydrazine propellants  
 [NASA-CASE-XNP-00876] c28 N70-41311
- MONOPULSE ANTENNAS**  
 Electronic and mechanical scanning control system for monopulse tracking antenna  
 [NASA-CASE-XGS-05582] c07 N69-27460  
 Development and characteristics of low-noise multimode monopulse antenna feed system for use with microwave communication equipment  
 [NASA-CASE-XNP-01735] c07 N71-22750  
 Monopulse scanning network for scanning volumetric antenna pattern  
 [NASA-CASE-GSC-10299-1] c09 N71-24804  
 Switchable beamwidth monopulse method and system  
 [NASA-CASE-GSC-11924-1] c33 N76-27472
- MONOPULSE RADAR**  
 Polarization diversity monopulse tracking receiver design without radio frequency switches  
 [NASA-CASE-XGS-03501] c09 N71-20864  
 Monopulse tracking system with antenna array of three radiators for deriving azimuth and elevation indications  
 [NASA-CASE-XGS-01155] c10 N71-21483
- MONOSTABLE MULTIVIBRATORS**  
 Development and characteristics of resettable monostable pulse generator with charge rundown-timing circuit  
 [NASA-CASE-GSC-11139] c09 N71-27016  
 Monostable multivibrator for producing output pulse widths with positive feedback NOR gates  
 [NASA-CASE-MS-13492-1] c10 N71-28860
- MOSSBAUER EFFECT**  
 Mossbauer spectrometer radiation detector  
 [NASA-CASE-LAR-11155-1] c35 N74-15091  
 Method and apparatus for vibration analysis utilizing the Mossbauer effect  
 [NASA-CASE-XMF-05882] c35 N75-27329
- MOTION**  
 Quick attach mechanism for moving or stationary wires, ropes, or cables  
 [NASA-CASE-XFR-05421] c15 N71-22994
- MOTION PICTURES**  
 Real time moving scene holographic camera system  
 [NASA-CASE-MFS-21087-1] c35 N74-17153  
 Real time, large volume, moving scene holographic camera system  
 [NASA-CASE-MFS-22537-1] c35 N75-27328
- MOTION SIMULATORS**  
 Kinesthetic control simulator --- for pilot training  
 [NASA-CASE-LAR-10276-1] c09 N75-15662
- Helmet weight simulator  
 [NASA-CASE-LAR-12320-1] c54 N81-27806
- MOTION STABILITY**  
 Hydraulic drive mechanism for leveling isolation platforms  
 [NASA-CASE-XMS-03252] c15 N71-10658
- MOTORS**  
 Nonmagnetic thermal motor for magnetometer movement  
 [NASA-CASE-XAR-03786] c09 N69-21313  
 System for maintaining motor at predetermined speed using digital pulses  
 [NASA-CASE-XMF-06892] c09 N71-24805  
 Mechanical thermal motor  
 [NASA-CASE-MFS-23062-1] c37 N77-12402  
 Redundant motor drive system  
 [NASA-CASE-MFS-23777-1] c37 N80-32716
- MOUNTING**  
 Mounting fixture for supporting thermobulb in pipeline  
 [NASA-CASE-NFO-10158] c33 N71-16356  
 Mounting apparatus for temperature control system  
 [NASA-CASE-NFO-10138] c33 N71-16357  
 Inertial component clamping assembly design for spacecraft guidance and control system mounting  
 [NASA-CASE-XMS-02184] c15 N71-20813  
 Techniques for packaging and mounting printed circuit boards  
 [NASA-CASE-MFS-21919-1] c10 N73-25243  
 Lubricated journal bearing  
 [NASA-CASE-LEW-11076-3] c37 N75-30562  
 Translatory shock absorber for attitude sensors  
 [NASA-CASE-MFS-22905-1] c19 N76-22284  
 Deformable bearing seat  
 [NASA-CASE-LEW-12527-1] c37 N77-32500  
 Impact absorbing blade mounts for variable pitch blades  
 [NASA-CASE-LEW-12313-1] c37 N78-10468  
 Attaching of strain gages to substrates  
 [NASA-CASE-FRC-10093-1] c35 N80-20560  
 Unidirectional flexural pivot  
 [NASA-CASE-GSC-12622-1] c37 N81-22359  
 Clamp-mount device  
 [NASA-CASE-MFS-25510-1] c37 N82-11470
- MOVING TARGET INDICATORS**  
 Automatic vehicle location system  
 [NASA-CASE-NFC-11850-1] c32 N74-12912  
 Interferometric locating system  
 [NASA-CASE-NFO-14173-1] c04 N80-32359
- MULTICHANNEL COMMUNICATION**  
 Tape guidance system for multichannel digital recording system  
 [NASA-CASE-XNF-09453] c08 N71-19420  
 Plural channel data transmission system with quadrature modulation and complementary demodulation  
 [NASA-CASE-XAC-06302] c08 N71-19763  
 Improved phase lock loop for receiver in multichannel telemetry system with suppressed carrier  
 [NASA-CASE-NFO-11593-1] c07 N73-28012  
 Miniature multichannel biotelemetry system  
 [NASA-CASE-NFO-13065-1] c52 N74-26625  
 Medical subject monitoring systems --- multichannel monitoring systems  
 [NASA-CASE-MS-14180-1] c52 N76-14757  
 Multi-channel rotating optical interface for data transmission  
 [NASA-CASE-NFO-14066-1] c74 N79-34011
- MULTILAYER INSULATION**  
 Electrode sealing and insulation for fuel cells containing caustic liquid electrolytes using powdered plastic and metal  
 [NASA-CASE-XMS-01625] c15 N71-23022  
 Multilayer insulation panels for cryogenic liquid containers  
 [NASA-CASE-MFS-14023] c33 N71-25351  
 Electrical failure detector in solid rocket propellant motor insulation against thermal degradation by fuel grain  
 [NASA-CASE-XMF-03968] c14 N71-27186  
 Method of making an insulation foil  
 [NASA-CASE-LEW-11484-1] c24 N75-33181  
 Multiwall thermal protection system  
 [NASA-CASE-LAR-12620-1] c24 N80-12117  
 Process for preparing high temperature polyimide film laminates  
 [NASA-CASE-LAR-12742-1] c24 N81-12174



## MULTIPLIER DISCHARGES

High power HF coaxial switch  
[NASA-CASE-NPO-14229-1] c33 N80-18285

## MULTIPATH TRANSMISSION

Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c32 N77-10392  
Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c36 N82-13415

## MULTIPLE BEAM INTERVAL SCANNERS

Tracking antenna system with array for  
synchronous satellite or ground based radar  
[NASA-CASE-GSC-10553-1] c07 N71-19554  
Variable beamwidth antenna --- with multiple  
beam, variable feed system  
[NASA-CASE-GSC-11862-1] c32 N76-18295

## MULTIPLE DOCKING ADAPTERS

Probe and drogue assembly for mechanical linking  
of two space vehicles  
[NASA-CASE-XMS-03613] c31 N71-16346

## MULTIPLE OUTPUT PROGRAMS

Multi-computer multiple data path hardware  
exchange system  
[NASA-CASE-NPO-13422-1] c60 N76-14818

## MULTIPLEXING

Doppler frequency shift correction device for  
multiplex communication with Applications  
Technology Satellites  
[NASA-CASE-XGS-02749] c07 N69-39978  
Multiplexed communication system design  
including automatic correction of transmission  
errors introduced by frequency spectrum shifts  
[NASA-CASE-XNP-01306] c17 N71-20814  
Satellite network synchronization system with  
multiple access to multiplex repeater  
[NASA-CASE-GSC-10390-1] c07 N72-11149  
Apparatus with summing network for compression  
of analog data by decreasing slope threshold  
sampling  
[NASA-CASE-NPO-10769] c08 N72-11171  
Development and characteristics of data  
multiplexer circuit using field effect  
transistors arranged in tree switching  
configuration  
[NASA-CASE-NPO-11333] c08 N72-22162  
Television multiplexing system, using single  
crystal controlled clock for signal  
synchronization  
[NASA-CASE-KSC-10654-1] c07 N73-30115  
Asynchronous, multiplexing, single line  
transmission and recovery data system --- for  
satellite use  
[NASA-CASE-NPO-13321-1] c32 N75-26195  
Correlation type phase detector --- with time  
correlation integrator for frequency  
multiplexed signals  
[NASA-CASE-GSC-11744-1] c33 N75-26243  
System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c74 N77-18893  
Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c74 N78-14889  
System for a displaying at a remote station data  
generated at a central station and for  
powering the remote station from the central  
station  
[NASA-CASE-GSC-12411-1] c33 N81-14221  
Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c32 N81-25278  
High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c60 N81-27814

## MULTIPLIERS

Pulse duration modulation multiplier system  
[NASA-CASE-XER-09213] c07 N71-12390  
Design and development of variable pulse width  
multiplier  
[NASA-CASE-XLA-02850] c09 N71-20447  
Capacitance multiplier and filter synthesizing  
network  
[NASA-CASE-NPO-11948-1] c33 N74-32712  
Regulated high efficiency, lightweight  
capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c33 N78-32341

## MULTISPECTRAL BAND SCANNERS

Optical process for producing classification  
maps from multispectral data  
[NASA-CASE-MSC-14472-1] c43 N77-10584  
Interactive color display for multispectral  
imagery using correlation clustering  
[NASA-CASE-MSC-16253-1] c32 N79-20297

## Multispectral scanner optical system

[NASA-CASE-MSC-18255-1] c74 N80-33210  
Medical diagnosis system and method with  
multispectral imaging --- depth of burns and  
optical density of the skin  
[NASA-CASE-NPO-14402-1] c52 N81-27783

## MULTISPECTRAL LINEAR ARRAYS

Time delay and integration detectors using  
charge transfer devices  
[NASA-CASE-GSC-12324-1] c33 N81-33403

## MULTISPECTRAL PHOTOGRAPHY

Computerized optical system for producing  
multiple images of a scene simultaneously  
[NASA-CASE-MSC-12404-1] c23 N73-13661  
Optical process for producing classification  
maps from multispectral data  
[NASA-CASE-MSC-14472-1] c43 N77-10584  
Multispectral imaging and analysis system ---  
using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c43 N79-17288  
Interactive color display for multispectral  
imagery using correlation clustering  
[NASA-CASE-MSC-16253-1] c32 N79-20297

## MULTISTAGE ROCKET VEHICLES

Techniques for recovery of multistage rocket  
vehicles by providing lifting surfaces on  
individual sections  
[NASA-CASE-XMF-00389] c31 N70-34176  
Steerable solid propellant rocket motor adapted  
to effect payload orientation as multistage  
rocket stage or reduce velocity as retrorocket  
[NASA-CASE-XNP-00234] c28 N70-38645  
Multi-mission space vehicle module stage design  
[NASA-CASE-XMF-01543] c31 N71-17730  
Separation mechanism for use between stages of  
multistage rocket vehicles  
[NASA-CASE-XLA-00188] c15 N71-22874  
Development of remotely controlled shaped charge  
for lateral displacement of rocket stages  
after separation  
[NASA-CASE-XLA-04804] c31 N71-23008  
Frangible connecting link suitable for rocket  
stage separation  
[NASA-CASE-MSC-11849-1] c15 N72-22488

## MULTIVIBRATORS

Extra-long monostable multivibrator employing  
bistable semiconductor switch to allow  
charging of timing circuit  
[NASA-CASE-XGS-00381] c09 N70-34819  
Variable frequency magnetic coupled  
multivibrator with temperature compensated  
frequency control circuit  
[NASA-CASE-XGS-00458] c09 N70-38604  
Variable frequency magnetic coupled  
multivibrator with output signal of constant  
amplitude and waveform  
[NASA-CASE-XGS-00131] c09 N70-38995  
Improved semiconductor multivibrator circuit  
which approaches 100 percent efficiency  
[NASA-CASE-XAC-00942] c10 N71-16042  
Transistorized dc-coupled multivibrator with  
noninverted output signal  
[NASA-CASE-XNF-09450] c10 N71-18723  
One shot multivibrator circuit for producing  
long duration output pulses  
[NASA-CASE-ARC-10137-1] c09 N71-28468

## MUSCLES

Subminiature insertable force transducer ---  
including a strain gage to measure forces in  
muscles  
[NASA-CASE-NPO-13423-1] c33 N75-31329  
Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c52 N81-20703

## MUSCULAR FUNCTION

Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c33 N76-19338  
Simultaneous muscle force and displacement  
transducer  
[NASA-CASE-NPO-14212-1] c52 N80-27072

## MUSCULOSKELETAL SYSTEM

Method and apparatus for applying compressional  
forces to skeletal structure of subject to  
simulate force during ambulatory conditions  
[NASA-CASE-ARC-10100-1] c05 N71-24738

## MYOCARDIUM

Myocardium wall thickness transducer and  
measuring method  
[NASA-CASE-NPO-13644-1] c52 N76-29895

Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c52 N80-27072

**N**

**N-TYPE SEMICONDUCTORS**  
Complementary DMOS-V MOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c33 N79-12321  
Schottky barrier cell and method of fabricating it  
[NASA-CASE-NPO-13689-4] c44 N81-26553

**NACELLES**  
Deflector for preventing objects from entering nacelle inlets of jet aircraft  
[NASA-CASE-XLE-00388] c28 N70-34788  
Afterburner-equipped jet engine nacelle with slotted configuration afterbody  
[NASA-CASE-XLA-10450] c28 N71-21493  
Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c07 N78-18066  
Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c07 N79-14096

**NASA PROGRAMS**  
Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c37 N79-22474

**NAVIGATION**  
Navigation system and method  
[NASA-CASE-GSC-12508-1] c04 N81-26085

**NAVIGATION AIDS**  
Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c04 N76-20114  
Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c04 N78-17031  
Low-frequency radio navigation system  
[NASA-CASE-NFO-15264-1] c04 N81-22036  
System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c06 N82-16075

**NAVIGATION INSTRUMENTS**  
Sun angle calculator  
[NASA-CASE-MSC-12617-1] c35 N76-29552

**NAVIGATION SATELLITES**  
Satellite aided aircraft collision avoidance system effective for large number of aircraft  
[NASA-CASE-ERC-10090] c21 N71-24948

**NEAR INFRARED RADIATION**  
Collimator for analyzing spatial location of near and distant sources of radiation  
[NASA-CASE-MFS-20546-2] c14 N73-30389

**NEGATIVE FEEDBACK**  
Complementary regenerative transistorized switch circuit employing positive and negative feedback  
[NASA-CASE-XGS-02751] c09 N71-23015  
Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c33 N77-14335

**NEODYMIUM LASERS**  
Length controlled stabilized mode-lock Nd:YAG laser  
[NASA-CASE-GSC-11571-1] c36 N77-25499

**NETWORK SYNTHESIS**  
Left and right hand circular electromagnetic polarization excitation by phase shifter and hybrid networks  
[NASA-CASE-GSC-10021-1] c09 N71-24595  
High speed phase detector design indicating phase relationship between two square wave input signals  
[NASA-CASE-XNP-01306-2] c09 N71-24596  
Tuned analog network --- bandpass filter networks  
[NASA-CASE-GSC-12650-1] c33 N82-10324

**NEUROGLIA**  
Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c52 N77-14738

**NEUROLOGY**  
An implantable electrical device  
[NASA-CASE-GSC-12560-1] c52 N80-27073

**NEUTRALIZERS**  
Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c33 N77-10429  
Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c27 N82-10227

**NEUTRON EMISSION**  
Deuterium pass through target --- neutron emitting target

[NASA-CASE-LEW-11866-1] c72 N76-15860

**NICKEL**  
Process for producing dispersion strengthened nickel with aluminum comprising metallic matrices embedded with oxides or other hyperfine compounds  
[NASA-CASE-XLF-06969] c17 N71-24142  
Selective nickel deposition on irradiation sensitive compounds  
[NASA-CASE-LEW-10965-1] c15 N72-25452  
Brazing alloy composition  
[NASA-CASE-XMF-06053] c26 N75-27126  
Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c24 N77-19171  
Directionally solidified eutectic gamma-gamma nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c26 N78-18183

**NICKEL ALLOYS**  
Preparation of nickel alloys for jet turbine blades operating at high temperatures  
[NASA-CASE-XLE-00151] c17 N70-33283  
Nickel alloy series for aerospace structures subjected to high temperatures  
[NASA-CASE-XLE-00283] c17 N70-36616  
Nickel base alloy with resistance to oxidation at high temperatures and superior stress-rupture properties  
[NASA-CASE-XLE-02082] c17 N71-16026  
High strength nickel based alloys  
[NASA-CASE-LEW-10874-1] c17 N72-22535  
Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c37 N74-21055  
Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c26 N75-29236  
Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c26 N77-20201  
Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c26 N77-32279  
Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c26 N77-32280  
Nickel ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c26 N81-12211

**NICKEL CADMIUM BATTERIES**  
Heat flow calorimeter --- measures output of Ni-Cd batteries  
[NASA-CASE-GSC-11434-1] c34 N74-27859  
Method and apparatus for conditioning of nickel-cadmium batteries  
[NASA-CASE-MFS-23270-1] c44 N76-25531

**NICKEL COATINGS**  
Intermetallic chromium containing nickel aluminide for high temperature corrosion protection of stainless steels  
[NASA-CASE-LEW-11267-1] c17 N73-32414  
Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c44 N78-19599

**NICKEL COMPOUNDS**  
Including didymium hydrate in nickel hydroxide of positive electrode of storage batteries to increase ampere hour capacity  
[NASA-CASE-IGS-03505] c03 N71-10608  
Brazing alloy  
[NASA-CASE-XNP-03878] c26 N75-27127

**NICKEL FLATE**  
Nickel plating onto etched aluminum castings  
[NASA-CASE-XNP-04148] c17 N71-24830

**NICKEL ZINC BATTERIES**  
Additive for zinc electrodes  
[NASA-CASE-LEW-13286-1] c44 N81-27597

**NIOBIUM**  
Organometallic compounds of niobium and tantalum useful for film deposition  
[NASA-CASE-XNF-04023] c06 N71-28808

**NITRAMINE PROPELLANTS**  
Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NFC-14103-1] c28 N78-31255

**NITRATES**  
Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-1] c26 N80-19237

**NITRIC OXIDE**  
Reduction of nitric oxide emissions from a

- combustor  
[NASA-CASE-ARC-10814-2] c07 N80-26298
- NITRILES**  
Intumescent paint containing nitrile rubber for fire protection  
[NASA-CASE-ARC-10196-1] c18 N73-13562  
Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c27 N78-15276  
Preparation of perfluorinated imidoamidoximes --- for eventual preparation of heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-1] c23 N80-26386
- NITRO COMPOUNDS**  
Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c24 N78-14096
- NITROAMINES**  
Nitroaniline sulfate, intumescent paints  
[NASA-CASE-ARC-10099-1] c18 N71-15439  
Mercaptan terminated polymer containing sulfonic acid salts of nitrosubstituted aromatic amines for heat and moisture resistant coatings  
[NASA-CASE-ARC-10325] c06 N72-25147
- NITROGEN**  
III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c33 N76-31409
- NITROGEN COMPOUNDS**  
Method for preparing addition type polyimide prepergs  
[NASA-CASE-LAR-12054-2] c27 N81-14078
- NITROGEN OXIDES**  
Combustion engine --- for air pollution control  
[NASA-CASE-NFO-13671-1] c37 N77-31497  
Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c25 N79-11151
- NITROGEN TETROXIDE**  
Gas chromatographic method for determining water in nitrogen tetroxide rocket propellant  
[NASA-CASE-NPO-10234] c06 N72-17094
- NITROGUANIDINE**  
Solid propellant stabilizer containing nitroguanidine  
[NASA-CASE-NFO-12000] c27 N72-25699
- NODES (STANDING WAVES)**  
Systems for controlled acoustic rotation of objects  
[NASA-CASE-NFO-15522-1] c71 N82-11861
- NOISE GENERATORS**  
Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c35 N75-21582  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c35 N77-17426
- NOISE MEASUREMENT**  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c54 N81-31848
- NOISE METERS**  
Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c35 N75-19614  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c71 N78-14867  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c54 N81-31848
- NOISE REDUCTION**  
Upper surface, external flow, jet-augmented flap configuration for high wing jet aircraft for noise reduction  
[NASA-CASE-XLA-00087] c02 N70-33332  
Cassegrain antenna subreflector flange for suppressing ground noise and increasing antenna transmitting efficiency  
[NASA-CASE-XNP-00683] c09 N70-35425  
Device for adding water to high velocity exhaust jets to reduce velocity, noise, and temperature  
[NASA-CASE-XNF-01813] c28 N70-41582  
Variable time constant, wide frequency range smoothing network for noise removal from pulse chains  
[NASA-CASE-XGS-01983] c10 N70-41964  
Digital telemetry system apparatus to reduce tape recorder wow and flutter noise during playback  
[NASA-CASE-XGS-01812] c07 N71-23001  
Audio signal processing system for noise surge elimination at low amplitude audio input  
[NASA-CASE-MSC-12223-1] c07 N71-26181
- Variable frequency nuclear magnetic resonance spectrometer providing drive signals over wide frequency range and minimizing noise effects  
[NASA-CASE-XNP-09830] c14 N71-26266  
Noise elimination in coherent imaging system by axial rotation of optical lense for spectral distribution of degrading affects  
[NASA-CASE-GSC-11133-1] c23 N72-11568  
Audio equipment for removing impulse noise from audio signals  
[NASA-CASE-NFO-11631] c10 N73-12244  
Gas turbine exhaust nozzle --- for noise reduction  
[NASA-CASE-LEW-11569-1] c07 N74-15453  
Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c37 N74-21057  
Jet exhaust noise suppressor  
[NASA-CASE-LEW-11286-1] c07 N74-27490  
Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c07 N74-28226  
Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c07 N74-31270  
Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c07 N74-32418  
Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c07 N74-33218  
Television noise reduction device  
[NASA-CASE-MSC-12607-1] c32 N75-21485  
Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c07 N76-18117  
Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c07 N76-18131  
Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MFS-23099-1] c09 N76-23273  
Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-MSC-12640-1] c74 N76-31998  
Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c07 N78-17055  
Magneto-optic detection system with noise cancellation  
[NASA-CASE-NFO-11954-1] c35 N78-29421  
Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c37 N79-13364  
Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c71 N79-14871  
Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c05 N80-14107  
Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NFO-14253-1] c32 N80-32605  
Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c07 N81-14999  
A rectangular rod-wall sound shield  
[NASA-CASE-LAR-12883-1] c09 N81-29138
- NOISE TEMPERATURE**  
Input radio frequency circuit for switching type absolute temperature measuring radiometer for noise sources  
[NASA-CASE-ZRC-11020] c14 N71-26774
- NOISE THRESHOLD**  
Threshold extension device for improving operating performance of frequency modulation demodulators by eliminating click-type noise impulses  
[NASA-CASE-MSC-12165-1] c07 N71-33696
- NONADIABATIC CONDITIONS**  
Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c34 N78-27357
- NONDESTRUCTIVE TESTS**  
Nondestructive radiographic tests of resistance welds  
[NASA-CASE-XNF-02588] c15 N71-18613  
Space environment simulator for testing spacecraft components under aerospace conditions  
[NASA-CASE-NFO-10141] c11 N71-24964  
Apparatus for semiautomatic inspection of microfilmed documents for density, resolution, size, and position  
[NASA-CASE-MFS-20240] c14 N71-26788

- Dye penetrant and technique for nondestructive tests of solid surfaces contacted by liquid oxygen  
[NASA-CASE-XMF-02221] c18 N71-27170
- Method and photodetector device for locating abnormal voids in low density materials  
[NASA-CASE-MFS-20044] c14 N71-28993
- Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c35 N75-25124
- Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c38 N76-28563
- Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c35 N78-24515
- Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c38 N78-32447
- NON-EQUILIBRIUM CONDITIONS**  
Condition sensor system and method  
[NASA-CASE-MSC-14805-1] c54 N78-32720
- NON-EQUILIBRIUM PLASMAS**  
Plasma probes having guard ring and primary sensor at same potential to prevent stray wall current collection in ionized gases  
[NASA-CASE-XLE-00690] c25 N69-39884
- NON-EQUILIBRIUM RADIATION**  
Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c73 N78-19920
- NON-FLAMMABLE MATERIALS**  
Intumescent paint containing nitrile rubber for fire protection  
[NASA-CASE-ARC-10196-1] c18 N73-13562
- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c27 N76-24405
- NONLINEAR FEEDBACK**  
Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c32 N74-30523
- Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c33 N76-14373
- NONLINEAR SYSTEMS**  
Detector assembly for discriminating first signal with respect to presence or absence of second signal at time of occurrence of first signal  
[NASA-CASE-XMF-00701] c09 N70-40272
- Describing continuous analog to digital converter with parallel digital output and nonlinear feedback  
[NASA-CASE-XAC-04031] c08 N71-18594
- Split range transducer  
[NASA-CASE-XLA-11189] c10 N72-20222
- Contour measurement system  
[NASA-CASE-MFS-23726-1] c43 N79-26439
- NOSE CONES**  
Automatically deploying nozzle exit cone extension  
[NASA-CASE-XLE-01640] c31 N71-15637
- Nose cone mounted heat resistant antenna comprising plurality of adjacent layers of silica not introducing paths of high thermal conductivity through ablative shield  
[NASA-CASE-XMS-04312] c07 N71-22984
- NOSE WHEELS**  
Nose gear steering system for vehicles with main skids to provide directional stability after loss of aerodynamic control  
[NASA-CASE-XLA-01804] c02 N70-34160
- NOTCH STRENGTH**  
Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c33 N80-29583
- NOTCH TESTS**  
Vee-notching device --- with adjustable carriage  
[NASA-CASE-MFS-20730-1] c39 N74-13131
- Notch filter  
[NASA-CASE-MFS-23303-1] c32 N77-18307
- NOTCHES**  
Notch filter  
[NASA-CASE-MFS-23303-1] c32 N77-18307
- NOZZLE DESIGN**  
High thrust annular liquid propellant rocket engine and exhaust nozzle design  
[NASA-CASE-XLE-00078] c28 N70-33284
- Penshaped, supersonic exhaust nozzle design  
[NASA-CASE-XLE-00057] c28 N70-38711
- Telescoping-spike supersonic nozzle for turbojet or ramjet engines  
[NASA-CASE-XLE-00005] c28 N70-39899
- Automatically deploying nozzle exit cone extension  
[NASA-CASE-XLE-01640] c31 N71-15637
- Propellant injection assembly having individually removable and replaceable nozzles for liquid fueled rocket engines  
[NASA-CASE-XMF-00968] c28 N71-15660
- Development of collapsible nozzle extension for rocket engines  
[NASA-CASE-MFS-11497] c28 N71-16224
- Design and development of gas turbine combustion unit with nozzle guide vanes for introducing diluent air into combustion gases  
[NASA-CASE-XLE-103477-1] c28 N71-20330
- Prestressed rocket nozzle with ceramic inner rings and refractory metal outer rings  
[NASA-CASE-XNP-02888] c18 N71-21068
- Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c31 N74-23065
- Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c07 N78-17055
- Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c07 N79-14097
- Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c07 N80-32392
- Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c37 N81-25371
- Method and system for nuclear waste disposal --- control valves for encapsulating wastes  
[NASA-CASE-NPO-15454-1] c73 N82-12916
- Controlled overspray spray nozzle  
[NASA-CASE-MFS-25139-1] c34 N82-13376
- NOZZLE FLOW**  
System for aerodynamic control of rocket vehicles by secondary injection of fluid into nozzle exhaust stream  
[NASA-CASE-XLA-01163] c21 N71-15582
- Constructing fluid spike nozzle to eliminate heat transfer and high temperature problems inherent in physical spikes  
[NASA-CASE-XGS-01143] c31 N71-15647
- Electronic recording system for spatial mass distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NPO-10185] c10 N71-26339
- Tertiary flow injection system for thrust vectoring of propulsive nozzle flow  
[NASA-CASE-MFS-20831] c28 N71-29153
- Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c09 N78-31129
- NOZZLE GEOMETRY**  
Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c20 N79-21123
- NOZZLE INSERTS**  
Flexible rocket motor nozzle closure device to aid ignition and protect rocket chamber from foreign objects  
[NASA-CASE-XLA-02651] c28 N70-41967
- Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c09 N82-11088
- NUCLEAR EXPLOSION EFFECT**  
Development of method for protecting large and oddly shaped areas from radiant and convective heat  
[NASA-CASE-XNP-01310] c33 N71-28852
- NUCLEAR FUEL ELEMENTS**  
Tungsten-coated tungsten-uranium dioxide nuclear fuel plates  
[NASA-CASE-XLE-00209] c22 N73-32528
- NUCLEAR MAGNETIC RESONANCE**  
Variable frequency nuclear magnetic resonance spectrometer providing drive signals over wide frequency range and minimizing noise effects  
[NASA-CASE-XNP-09830] c14 N71-26266
- NUCLEAR POWER PLANTS**  
Development and characteristics of natural circulation radiator for use with nuclear power plants installed in lunar space stations  
[NASA-CASE-XHQ-03673] c33 N71-29046
- NUCLEAR PUMPED LASERS**  
Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c36 N79-18307
- NUCLEAR PUMPING**  
Large volume multiple-path nuclear pumped laser

[NASA-CASE-LAR-12592-1] c36 N82-13415

**NUCLEAR REACTOR CONTROL**  
 Absorbing gas reactivity control system for minimizing power distribution and perturbation in nuclear reactors  
 [NASA-CASE-XLE-04599] c22 N72-20597  
 Control for nuclear thermionic power source  
 [NASA-CASE-NPO-13114-2] c73 N78-28913

**NUCLEAR REACTORS**  
 Nuclear thermionic converter --- tungsten-thorium oxide rods  
 [NASA-CASE-NPO-13121-1] c73 N77-18891

**NUCLEATE BOILING**  
 Method for improving heat transfer characteristics in nucleate boiling process  
 [NASA-CASE-XMS-04268] c33 N71-16277

**NUCLEATION**  
 Method and apparatus for supercooling and solidifying substances --- containless melts and space processing  
 [NASA-CASE-MFS-25242-1] c35 N81-24413

**PULL ZONES**  
 Manual control mechanism for adjusting control rod to pull position  
 [NASA-CASE-XLA-01808] c15 N71-20740

**NUMBER THEORY**  
 Binary concatenated coding system  
 [NASA-CASE-MSC-14082-1] c60 N76-23850

**NUMERICAL CONTROL**  
 Digital sensor for counting fringes produced by interferometers with improved sensitivity and one photomultiplier tube to eliminate alignment problem  
 [NASA-CASE-LAR-10204] c14 N71-27215  
 Digital numerically controlled oscillator  
 [NASA-CASE-MSC-16747-1] c33 N81-17349  
 Controller for computer control of brushless dc motors --- automobile engines  
 [NASA-CASE-NPO-13970-1] c33 N81-20352

**NUMERICAL INTEGRATION**  
 Apparatus for computing square roots  
 [NASA-CASE-XGS-04768] c08 N71-19437

**NUOTATION**  
 Flexible turnstile antenna system for reducing nutation in spin-oriented satellites  
 [NASA-CASE-XMF-00442] c31 N71-10747  
 Nutation damper for use on spinning body  
 [NASA-CASE-GSC-11205-1] c15 N73-25513

**NUOTATION DAMPERS**  
 Active nutation controller  
 [NASA-CASE-GSC-12273-1] c35 N80-21719  
 Method of and apparatus for damping nutation motion with minimum spin axis attitude disturbance  
 [NASA-CASE-GSC-12551-1] c18 N81-12156

**NUTS (FASTENERS)**  
 Contamination free separation nut eliminating combustion products from ambient surroundings generated by squib firing  
 [NASA-CASE-XGS-01971] c15 N71-15922  
 Split nut and bolt separation device  
 [NASA-CASE-XNP-06914] c15 N71-21489  
 Device for securing together structural members with axially stretched bolt and nut  
 [NASA-CASE-GSC-11149-1] c15 N73-30457  
 High-torque open-end wrench  
 [NASA-CASE-NPO-13541-1] c37 N79-14383  
 Floating nut retention system  
 [NASA-CASE-MSC-16938-1] c37 N80-23653

## O

**O RING SEALS**  
 High pressure four-way valve with O ring adapted to pass across inlet port  
 [NASA-CASE-XNP-00214] c15 N70-36908  
 Modified spiral wound retaining ring  
 [NASA-CASE-LAR-12361-1] c37 N81-12422  
 Self-stabilizing radial face seal  
 [NASA-CASE-LEW-12991-1] c37 N81-24442  
 Circumferential shaft seal  
 [NASA-CASE-LEW-12119-2] c37 N81-26447

**OBLIQUE WINGS**  
 Oblique-wing supersonic aircraft  
 [NASA-CASE-ARC-10470-3] c05 N76-29217

**OCEAN DATA ACQUISITIONS SYSTEMS**  
 Oceanic wave measurement system  
 [NASA-CASE-MFS-23862-1] c48 N80-18667

**OCEAN SURFACE**  
 Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
 [NASA-CASE-NPO-13862-1] c35 N79-10391  
 Oceanic wave measurement system  
 [NASA-CASE-MFS-23862-1] c48 N80-18667

**OCEAN THERMAL ENERGY CONVERSION**  
 Ocean thermal plant  
 [NASA-CASE-KSC-11034-1] c44 N78-32542

**OFFSHORE PLATFORMS**  
 Ocean thermal plant  
 [NASA-CASE-KSC-11034-1] c44 N78-32542

**OHMMETERS**  
 Development of electrical system for indicating optimum contact between electrode and metal surface to permit improved soldering operation  
 [NASA-CASE-KSC-10242] c15 N72-23497

**OIL EXPLORATION**  
 Underwater seismic source --- for petroleum exploration  
 [NASA-CASE-NPO-14255-1] c46 N79-23555  
 Borehole geological assessment  
 [NASA-CASE-NPO-14231-1] c46 N80-10709

**OIL RECOVERY**  
 Oil and fat absorbing polymers  
 [NASA-CASE-NPO-11609-2] c27 N77-31308  
 In-situ laser retorting of oil shale  
 [NASA-CASE-LEW-12217-1] c43 N78-14452

**OILS**  
 Color photointerpretation of interference colors reflected from thin film oil-coated components in moving gases for gas flow visualization  
 [NASA-CASE-XMF-01779] c12 N71-20815  
 Oil and fat absorbing polymers  
 [NASA-CASE-NPO-11609-2] c27 N77-31308

**OMNIDIRECTIONAL ANTENNAS**  
 Microwave omnidirectional antenna for use on spacecraft  
 [NASA-CASE-XLA-03114] c09 N71-22888  
 Vertically stacked collinear array of independently fed omnidirectional antennas for use in collision warning systems on commercial aircraft  
 [NASA-CASE-LAR-10545-1] c09 N72-21244  
 Omnidirectional antenna array with circumferential slots for mounting on cylindrical space vehicle  
 [NASA-CASE-LAR-10163-1] c09 N72-25247

**ONBOARD EQUIPMENT**  
 Survival couch for aircraft or spacecraft crews  
 [NASA-CASE-XLA-00118] c05 N70-33285  
 Cryogenic storage system for gases onboard spacecraft  
 [NASA-CASE-XMS-04390] c31 N70-41871  
 Fiber optic transducers for monitoring and analysis of vibration in aerospace vehicles and onboard equipment  
 [NASA-CASE-XMF-02433] c14 N71-10616  
 Design and construction of satellite appendage tie-down cord  
 [NASA-CASE-XGS-02554] c31 N71-21064  
 Satellite aided aircraft collision avoidance system effective for large number of aircraft  
 [NASA-CASE-ERC-10090] c21 N71-24948  
 Closed loop servosystem for variable speed tape recorders onboard spacecraft  
 [NASA-CASE-NPO-10700] c07 N71-33613  
 Collapsible couch system for manned space vehicles  
 [NASA-CASE-MSC-13140] c05 N72-11085  
 Monostable multivibrator for conserving power in spacecraft systems  
 [NASA-CASE-GSC-10082-1] c10 N72-20221  
 Delayed simultaneous appendage release mechanism for use on spacecraft equipped with despin mechanisms and releasable components  
 [NASA-CASE-GSC-10814-1] c03 N73-20039  
 Electronic strain level counter on in-flight aircraft  
 [NASA-CASE-LAR-10756-1] c32 N73-26910  
 Magnetic heading reference  
 [NASA-CASE-LAR-11387-1] c04 N76-20114

**OPERATIONAL AMPLIFIERS**  
 Digital automatic gain amplifier  
 [NASA-CASE-KSC-11008-1] c33 N79-22373  
 Automatic level control circuit  
 [NASA-CASE-KSC-11170-1] c33 N81-29347  
 Low noise tuned amplifier  
 [NASA-CASE-GSC-12567-1] c33 N82-11359

## OPHTHALMOLOGY

- Ultrasonic device for ophthalmic eye surgery with safe removal of macerated material [NASA-CASE-LEW-11669-1] c05 N73-27062
- Ophthalmic liquifaction pump [NASA-CASE-LEW-12051-1] c52 N75-33640

## OPTICAL COMMUNICATION

- Fabry-Perot interferometer retrodirective reflector modulator for optical communication [NASA-CASE-XGS-04480] c16 N69-27491
- Specifications and drawings for semipassive optical communication system [NASA-CASE-XLA-01090] c07 N71-12389
- Optical communication system with gas filled waveguide for laser beam transmission [NASA-CASE-HQN-10541-4] c16 N71-27183
- Development and characteristics of optical communications system based on modulation of light beams [NASA-CASE-XLA-01090] c16 N71-28963
- High resolution radar transmitting system for transmitting optical pulses to targets [NASA-CASE-NPO-11426] c07 N73-26119
- Apparatus for simulating optical transmission links [NASA-CASE-GSC-11877-1] c74 N76-18913
- Fiber distributed feedback laser [NASA-CASE-NPO-13531-1] c36 N76-24553
- Polarization compensator for optical communications [NASA-CASE-GSC-11782-1] c74 N76-30053
- Gregorian all-reflective optical system [NASA-CASE-GSC-12058-1] c74 N77-26942
- Wideband heterodyne receiver for laser communication system [NASA-CASE-GSC-12053-1] c32 N77-28346
- Fiber optic multiplex optical transmission system [NASA-CASE-KSC-11047-1] c74 N78-14889
- Fiber optic crossbar switch for automatically patching optical signals [NASA-CASE-KSC-11104-1] c74 N81-12862

## OPTICAL COUPLING

- Automatic quadrature control and measuring system --- using optical coupling circuitry [NASA-CASE-MFS-21660-1] c35 N74-21017

## OPTICAL DATA PROCESSING

- Optical data processing system using paraboloidal reflecting surfaces [NASA-CASE-GSC-11296-1] c23 N73-30666
- Recorder/processor apparatus --- for optical data processing [NASA-CASE-GSC-11553-1] c35 N74-15831
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths [NASA-CASE-NPO-14525-1] c32 N79-19195
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths [NASA-CASE-NPO-14525-2] c32 N80-32607
- Interleaving device [NASA-CASE-GSC-12111-2] c33 N81-29342
- Real-time multiple-look synthetic aperture radar processor for spacecraft applications [NASA-CASE-NPO-14054-1] c32 N82-12297

## OPTICAL DENSITY

- Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin [NASA-CASE-NPO-14402-1] c52 N81-27783

## OPTICAL EMISSION SPECTROSCOPY

- Maksutov spectrograph for low light level research [NASA-CASE-XLA-10402] c14 N71-29041

## OPTICAL EQUIPMENT

- Detection instrument for light emitted from ATP biochemical reaction [NASA-CASE-XGS-05534] c23 N71-16355
- Optical characteristics measuring apparatus [NASA-CASE-XNP-08840] c23 N71-16365
- Combined optical attitude and altitude indicating instrument for use in aircraft or spacecraft [NASA-CASE-XLA-01907] c14 N71-23268
- Design and development of optical interferometer with laser light source for application to schlieren systems [NASA-CASE-XLA-04295] c16 N71-24170
- Highly stable optical mirror assembly optimizing image quality of light diffraction patterns

- [NASA-CASE-ERC-10001] c23 N71-24868
- Optical device containing rotatable prism and reflecting mirror for generating precise angles [NASA-CASE-XGS-04173] c19 N71-26674
- Development and characteristics of Petzval type objective including field shaping lens for focusing light of specified wavelength band on curved photoreceptor [NASA-CASE-GSC-10700] c23 N71-30027
- Development and characteristics of spectroradiometer with wedge filters to eliminate adverse effect of pinholes in filters [NASA-CASE-HQN-10683] c14 N71-34389
- Slotted fine-adjustment support for optical devices [NASA-CASE-MFS-20249] c15 N72-11386
- Development of process for constructing protective covers for solar cells [NASA-CASE-GSC-11514-1] c03 N72-24037
- Development of light sensing system for controlled orientation of object relative to sun or other light source [NASA-CASE-NPO-11311] c14 N72-25414
- Borescope with adjustable hinged telescoping optical system [NASA-CASE-MFS-15162] c14 N72-32452
- Development and characteristics of cyclically operable, optical shutter for use as focal plane shutter for transmitting single radiation pulses [NASA-CASE-NPO-10758] c14 N73-14427
- Method for producing reticles for use in outer space [NASA-CASE-GSC-11188-2] c21 N73-19630
- Method and equipment for locating earth infrared horizon from space, independent of season and latitude [NASA-CASE-LAR-10726-1] c14 N73-20475
- Optical imaging system for increasing light absorption efficiency of imaging detector [NASA-CASE-ARC-10194-1] c23 N73-20741
- Attitude sensor [NASA-CASE-LAR-10586-1] c19 N74-15089
- Formation of star tracking reticles [NASA-CASE-GSC-11188-3] c74 N74-20008
- Method and apparatus for optically monitoring the angular position of a rotating mirror [NASA-CASE-GSC-11353-1] c74 N74-21304
- Single reflector interference spectrometer and drive system therefor [NASA-CASE-NPO-11932-1] c35 N74-23040
- Strain gauge ambiguity sensor for segmented mirror active optical system [NASA-CASE-MFS-20506-1] c35 N75-12273
- Optical alignment device [NASA-CASE-ARC-10932-1] c74 N76-22993
- Visual examination apparatus [US-PATENT-RE-28,921] c52 N76-30793
- Optical instrument employing reticle having preselected visual response pattern formed thereon [NASA-CASE-ARC-10976-1] c74 N77-22950
- Opto-mechanical subsystem with temperature compensation through isothermal design [NASA-CASE-GSC-12059-1] c35 N77-27366
- Method and apparatus for producing an image from a transparent object [NASA-CASE-GSC-11989-1] c74 N77-28932
- Method of treating the surface of a glass member [NASA-CASE-GSC-12110-1] c27 N77-32308
- Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses [NASA-CASE-ARC-11039-1] c74 N78-32854
- Water system virus detection [NASA-CASE-MSC-16098-1] c51 N79-10693
- Method of forming a sharp edge on an optical device [NASA-CASE-GSC-12348-1] c74 N80-24149

## OPTICAL FILTERS

- Lens assembly for solar furnace or solar simulator [NASA-CASE-XNP-04111] c14 N71-15622
- Noise elimination in coherent imaging system by axial rotation of optical lens for spectral distribution of degrading affects [NASA-CASE-GSC-11133-1] c23 N72-11568
- Optical noise suppression device and method --- laser light exposing film

[NASA-CASE-MSC-12640-1] c74 N76-31998  
 System for producing chroma signals  
 [NASA-CASE-MSC-14683-1] c74 N77-18893  
 Optical conversion method --- for spacecraft  
 television  
 [NASA-CASE-MSC-12618-1] c74 N78-17865  
 Partial polarizer filter  
 [NASA-CASE-GSC-12225-1] c74 N79-14891

## OPTICAL GYROSCOPES

Optical gyroscope system  
 [NASA-CASE-NPO-14258-1] c35 N81-33448

## OPTICAL HETERODYNING

Computerized optical system for producing  
 multiple images of a scene simultaneously  
 [NASA-CASE-MSC-12404-1] c23 N73-13661  
 Gregorian all-reflective optical system  
 [NASA-CASE-GSC-12058-1] c74 N77-26942  
 Wideband heterodyne receiver for laser  
 communication system  
 [NASA-CASE-GSC-12053-1] c32 N77-28346

## OPTICAL MEASUREMENT

Passive optical wind and turbulence remote  
 detection system  
 [NASA-CASE-XMP-14032] c20 N71-16340  
 Ellipsoidal mirror reflector for measuring  
 reflectance  
 [NASA-CASE-XGS-05291] c23 N71-16341  
 Single reflector interference spectrometer and  
 drive system therefor  
 [NASA-CASE-NPO-11932-1] c35 N74-23040  
 Hybrid holographic non-destructive test system  
 [NASA-CASE-MFS-23114-1] c38 N78-32447  
 Plural output optometric sample cell and  
 analysis system  
 [NASA-CASE-NPO-10233-1] c74 N78-33913  
 Rotary target V-bluck --- aligning wind tunnel  
 apparatus for optical measurement  
 [NASA-CASE-LAR-12007-2] c74 N79-25876  
 Interferometric angle monitor  
 [NASA-CASE-GSC-12614-1] c35 N81-12386  
 Apparatus for fiber optic liquid level sensing  
 [NASA-CASE-MSC-18674-1] c74 N81-24907

## OPTICAL MEASURING INSTRUMENTS

Design and development of optically pumped  
 resonance magnetometer for determining  
 vectoral components in spatial coordinate system  
 [NASA-CASE-XGS-04879] c14 N71-20428  
 Optical gauging system for monitoring machine  
 tool alignment  
 [NASA-CASE-XAC-05489-1] c15 N71-26673  
 Optical system for selecting particular  
 wavelength light beams from multiple  
 wavelength light source  
 [NASA-CASE-ERC-10248] c14 N72-17323  
 Optical sensing of supersonic flows by  
 correlating deflections in laser beams through  
 flow  
 [NASA-CASE-MFS-20642] c14 N72-21407  
 Multiparameter vision testing apparatus  
 [NASA-CASE-MSC-13601-2] c54 N75-27759  
 Noncontacting method for measuring angular  
 deflection  
 [NASA-CASE-LAR-12178-1] c74 N80-21138  
 Visible and infrared polarization ratio  
 spectrophotometer  
 [NASA-CASE-LAR-12285-1] c35 N80-28687  
 Film advance indicator  
 [NASA-CASE-LAR-12474-1] c35 N80-31774  
 Optical crystal temperature gauge with fiber  
 optic connections --- cryogenic systems  
 [NASA-CASE-MSC-18627-1] c74 N81-15818  
 Interferometer  
 [NASA-CASE-NPO-14502-1] c74 N81-17888  
 Focal plane array optical proximity sensor  
 [NASA-CASE-NPO-15155-1] c74 N81-22894

## OPTICAL PATHS

Optical instruments  
 [NASA-CASE-MSC-14096-1] c74 N74-15095  
 Large volume multiple-path nuclear pumped laser  
 [NASA-CASE-LAR-12592-1] c36 N82-13415

## OPTICAL PROPERTIES

Remote-reading torque meter for use where high  
 horsepowers are transmitted at high rotative  
 speeds  
 [NASA-CASE-XLE-00503] c14 N70-34818  
 Quasi-optical microwave circuit with dielectric  
 body for use with oversize waveguides  
 [NASA-CASE-ERC-10011] c67 N71-29065

Development of light sensing system for  
 controlled orientation of object relative to  
 sun or other light source  
 [NASA-CASE-NPO-11311] c14 N72-25414  
 Design and development of light sensing device  
 for controlling orientation of object relative  
 to sun or other light source  
 [NASA-CASE-NPO-11201] c14 N72-27409  
 Device and method for determining X ray  
 reflection efficiency, scattering properties,  
 and surface finish of optical surfaces  
 [NASA-CASE-MFS-20243] c23 N73-13662  
 Formation of star tracking reticles  
 [NASA-CASE-GSC-11188-3] c74 N74-20008  
 Optically actuated two position mechanical mover  
 [NASA-CASE-NPO-13105-1] c37 N74-21060  
 Modification of the electrical and optical  
 properties of polymers --- ion irradiation to  
 create texture  
 [NASA-CASE-LEW-13027-1] c27 N80-24437  
 Heat transparent high intensity high efficiency  
 solar cell  
 [NASA-CASE-LEW-12892-1] c44 N81-27598

## OPTICAL PUMPING

Xenon flashlamp driver system for optical laser  
 pumping  
 [NASA-CASE-ERC-10283] c16 N72-25485  
 Laser head for simultaneous optical pumping of  
 several dye lasers --- with single flash lamp  
 [NASA-CASE-LAR-11341-1] c36 N75-19655  
 Stabilization of He2(a 3 Sigma u+ molecules in  
 liquid helium by optical pumping for vacuum UV  
 laser 6  
 [NASA-CASE-NPO-13993-1] c72 N79-13826  
 Off-axis coherently pumped laser  
 [NASA-CASE-GSC-12592-1] c36 N81-12407  
 Active lamp pulse driver circuit --- for use in  
 laser transmitters  
 [NASA-CASE-GSC-12566-1] c36 N82-10390

## OPTICAL PYROMETERS

Filter arrangement for controlling light  
 intensity in motion picture camera used in  
 optical pyrometry  
 [NASA-CASE-XLA-00062] c14 N70-33254

## OPTICAL RADAR

Acquisition and tracking system for optical radar  
 [NASA-CASE-MFS-20125] c16 N72-13437

## OPTICAL RANGE FINDERS

Electro-optical attitude sensing device for  
 landing approach of flight vehicle  
 [NASA-CASE-XMS-01994-1] c14 N72-17326  
 Optical range finder using reflective first  
 surfaces mirror and transmitting beam splitter  
 [NASA-CASE-MSC-12105-1] c14 N72-21409

## OPTICAL REFLECTION

Hybrid holographic system using reference,  
 transmitted, and reflected beams simultaneously  
 [NASA-CASE-MFS-20074] c16 N71-15565  
 Optical device containing rotatable prism and  
 reflecting mirror for generating precise angles  
 [NASA-CASE-XGS-04173] c19 N71-26674  
 Illumination system design for use as sunlight  
 simulator in space environment simulators with  
 multiple light sources reflected to single  
 virtual source  
 [NASA-CASE-HCN-10781] c23 N71-30292  
 Composition of diffuse reflective coating  
 containing sodium chloride in combination with  
 diol solvent and organic wetting and drying  
 agents  
 [NASA-CASE-GSC-11214-1] c06 N73-13128  
 Gregorian all-reflective optical system  
 [NASA-CASE-GSC-12058-1] c74 N77-26942  
 Lightweight reflector assembly  
 [NASA-CASE-NPO-13707-1] c74 N77-28933  
 Method and apparatus for splitting a beam of  
 energy --- optical communication  
 [NASA-CASE-GSC-12083-1] c73 N78-32848  
 Apparatus for and method of compensating dynamic  
 unbalance  
 [NASA-CASE-GSC-12550-1] c37 N81-22358

## OPTICAL RESONANCE

Design and development of optically pumped  
 resonance magnetometer for determining  
 vectoral components in spatial coordinate system  
 [NASA-CASE-XGS-04879] c14 N71-20428  
 Laser system with an antiresonant optical ring  
 [NASA-CASE-HCN-10844-1] c36 N75-19653

## OPTICAL SCANNERS

Optical scanner mounted on rotating support structure with method of compensating for image or satellite rotation  
[NASA-CASE-XGS-02401] c14 N69-27485

Optical apparatus for visual detection of roundness and regularity of cone surfaces  
[NASA-CASE-XMF-00462] c14 N70-34298

Electro-optical system with scan-in illuminator and scan-out photosensor for scanning variable transmittance objects  
[NASA-CASE-NPO-11106] c14 N70-34697

Multi-lobar scan horizon sensor  
[NASA-CASE-XGS-00809] c21 N70-35427

Optical scanner with linear housing and rotating camera  
[NASA-CASE-NPO-11002] c14 N72-22441

Spacecraft attitude sensing system design with narrow field of view sensor rotating about spacecraft x-y axis  
[NASA-CASE-GSC-10890-1] c21 N73-30640

Optical instruments  
[NASA-CASE-MSC-14096-1] c74 N74-15095

Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c33 N75-30431

Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c66 N76-19888

Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c74 N78-17866

Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c74 N78-27904

Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c35 N80-20563

Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c76 N80-32245

**OPTICAL TRACKING**

Sun tracker with rotatable plane-parallel plate and two photocells  
[NASA-CASE-XGS-01159] c21 N71-10678

Optical tracker with pair of FM reticles having patterns 90 deg out of phase  
[NASA-CASE-XGS-05715] c23 N71-16100

Tracking mount for laser telescope employed in tracking large rockets and space vehicles to give information regarding azimuth and elevation  
[NASA-CASE-MFS-14017] c14 N71-26627

Solar tracking system  
[NASA-CASE-MFS-23999-1] c44 N81-24520

**OPTICAL TRANSFER FUNCTION**

Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c74 N76-19935

**OPTIMIZATION**

Power point tracker for maintaining optimal output voltage of power source  
[NASA-CASE-GSC-10376-1] c14 N71-27407

**ORAL HYGIENE**

Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c52 N81-12724

**ORBITAL ASSEMBLY**

Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c31 N81-27323

**ORBITAL MANEUVERS**

Passive propellant system  
[NASA-CASE-MFS-23642-1] c20 N80-10278

**ORBITAL MECHANICS**

Design and development of space shuttle system for delivering payload to earth orbit or celestial orbit  
[NASA-CASE-MSC-12391] c30 N73-12884

**ORBITAL SPACE STATIONS**

Radial module manned space station with artificial gravity environment  
[NASA-CASE-XMS-01906] c31 N70-41373

Internal and external serpentine devices for performing physical operations around orbital space stations  
[NASA-CASE-XMF-05344] c31 N71-16345

Describing apparatus for manufacturing operations in low and zero gravity environments of orbital space flight  
[NASA-CASE-MFS-20410] c15 N71-19214

**ORGANIC CHEMISTRY**

Process for interfacial polymerization of pyromellitic dianhydride and tetraamino benzene  
[NASA-CASE-XLA-03104] c06 N71-11235

Amino acid analysis  
[NASA-CASE-NFO-12130-1] c25 N75-14844

**ORGANIC COMPOUNDS**

Synthesis of high purity dianilinosilanes  
[NASA-CASE-XMF-06409] c06 N71-23230

Preparation of dicyanoacetylene and vinylidene copolymers using organic compounds  
[NASA-CASE-XMF-03250] c06 N71-23500

Infusible polymer production from reaction of polyfunctional epoxy resins with polyfunctional aziridine compounds  
[NASA-CASE-NFO-10701] c06 N71-28620

Composition of diffuse reflective coating containing sodium chloride in combination with diol solvent and organic wetting and drying agents  
[NASA-CASE-GSC-11214-1] c06 N73-13128

Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NFO-13063-1] c25 N76-18245

Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MSC-14428-1] c23 N77-17161

Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c25 N82-12166

**ORGANIC SILICON COMPOUNDS**

Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c27 N79-18052

Thermal control coatings based on trialkoxysilane hydrolyzate binders --- tolerance to ultraviolet radiation in vacuum  
[NASA-CASE-MFS-25620-1] c24 N82-11118

**ORGANIC SULFUR COMPOUNDS**

Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NFC-14272-1] c25 N81-33246

**ORGANOMETALLIC COMPOUNDS**

Ammonium perchlorate composite propellant with organic Cu/II/ chelate catalytic additive  
[NASA-CASE-LAR-10173-1] c27 N71-14090

Organometallic compounds of niobium and tantalum useful for film deposition  
[NASA-CASE-XNF-04023] c06 N71-28808

**ORGANOMETALLIC POLYMERS**

Chemical synthesis of thermally stable organometallic polymers with divalent metal ion and tetraphenylphosphonitrilic units  
[NASA-CASE-HCN-10364] c06 N71-27363

Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c37 N74-21058

**ORIFICE FLOW**

Relief valve to permit slow and fast bleeding rates at difference pressure levels  
[NASA-CASE-XMS-05894-1] c15 N69-21924

**ORIFICES**

Rocket engine injector orifice to accommodate changes in density, velocity, and pressure, thereby maintaining constant mass flow rate of propellant into rocket combustion chamber  
[NASA-CASE-XLF-03157] c28 N71-24736

**ORTHO HYDROGEN**

Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c34 N82-10358

**ORTHO PARA CONVERSION**

Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c34 N82-10358

**ORTHOGONAL MULTIPLEXING THEORY**

Encoders designed to generate comma free biorthogonal Reed-Muller type code comprising conversion of 64 6-bit words into 64 32-bit data for communication purposes  
[NASA-CASE-NFO-10595] c10 N71-25917

**ORTHOGONALITY**

Device for measuring two orthogonal components of force with gallium flotation of measuring target for use in vacuum environments  
[NASA-CASE-XAC-04885] c14 N71-23790

**ORTHOPEDICS**

Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c54 N76-22914

Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c52 N81-25661

**ORTHOTROPIC CYLINDERS**

Method for shaping regeneratively cooled rocket motor casing having minimum thickness at each channel cross section



- [NASA-CASE-XLE-00409] c28 N71-15658  
Regeneratively cooled rocket motor casing with tapered channels to insure minimum thicknesses at each channel cross section for necessary strength requirements  
[NASA-CASE-XLE-05689] c28 N71-15659
- OSCILLATION DAMPERS**  
Design and operation of viscous pendulum damper [NASA-CASE-XLA-02079] c12 N71-16894  
Stabilization system for gravity-oriented satellites using single damper rod [NASA-CASE-XAC-01591] c31 N71-17729  
Suspended mass oscillation damper based on impact energy absorption for damping wind induced oscillations of tall stacks, antennas, and umbilical towers [NASA-CASE-LAR-10193-1] c15 N71-27146  
Damper system for alleviating air flow shock loads on wind tunnel models [NASA-CASE-XLA-09480] c11 N71-33612  
Method of and apparatus for damping nutation motion with minimum spin axis attitude disturbance [NASA-CASE-GSC-12551-1] c18 N81-12156
- OSCILLATIONS**  
Development of electrical circuit for suppressing oscillations across inductor operating in resonant mode [NASA-CASE-ERC-10403-1] c10 N73-26228
- OSCILLATORS**  
Oscillatory electromagnetic mirror drive system for horizon scanners [NASA-CASE-XLA-03724] c14 N69-27461  
Frequency control network for current feedback oscillators converting dc voltage to ac or higher dc voltages [NASA-CASE-GSC-10041-1] c10 N71-19418  
Development and characteristics of oscillating static inverter [NASA-CASE-XGS-05289] c09 N71-19470  
Voltage controlled oscillators and pulse amplitude modulation for signal ratio system [NASA-CASE-XMF-04367] c09 N71-23545  
Development and characteristics of fluid oscillator analog to digital converter with variable frequency controlled by signal passing through conditioning circuit [NASA-CASE-LEW-10345-1] c10 N71-25899  
Wideband voltage controlled oscillator with high phase stability [NASA-CASE-XLA-03893] c10 N71-27271  
Variable frequency subcarrier oscillator with temperature compensation [NASA-CASE-XNP-03916] c09 N71-28810  
Inverter oscillator with voltage feedback [NASA-CASE-NPO-10760] c09 N72-25254  
Controlled oscillator system with a time dependent output frequency [NASA-CASE-NFO-11962-1] c33 N74-10194  
Ultra-stable oscillator with complementary transistors [NASA-CASE-GSC-11513-1] c33 N74-20862  
LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers [NASA-CASE-MPS-21698-1] c33 N74-26732  
Frequency modulated oscillator [NASA-CASE-MPS-23181-1] c33 N77-17351  
Distributed feedback acoustic surface wave oscillator [NASA-CASE-NFO-13673-1] c71 N77-26919  
JFET oscillator [NASA-CASE-GSC-12555-1] c33 N80-26601  
Digital numerically controlled oscillator [NASA-CASE-MSC-16747-1] c33 N81-17349
- OSCILLOSCOPES**  
Sign wave generation simulator for variable amplitude, frequency, damping, and phase pulses for oscilloscope display [NASA-CASE-NFO-10251] c10 N71-27365  
Scan oscilloscope for mapping surface sensitivity of photomultiplier tube [NASA-CASE-LAR-10320-1] c09 N72-23172  
Mechanical exposure interlock device for preventing film overexposure in oscilloscope camera [NASA-CASE-LAR-10319-1] c14 N73-32322  
X-Y alphanumeric character generator for oscilloscopes
- [NASA-CASE-GSC-11582-1] c33 N75-19517  
**OUTER PLANETS EXPLORERS**  
Spectrometer integrated with a facsimile camera [NASA-CASE-LAR-11207-1] c35 N75-19613
- OUTGASSING**  
Optical characteristics measuring apparatus [NASA-CASE-XNP-08840] c23 N71-16365  
Helium outgassing process for fused glass coating on ion accelerator grid [NASA-CASE-LEW-10278-1] c15 N71-28582  
Fluid polydimethylsiloxane resin with low outgassing properties in cured state [NASA-CASE-GSC-11358-1] c06 N73-26100
- OUTPUT**  
Nonlinear nonsingular feedback shift registers [NASA-CASE-NFO-13451-1] c33 N76-14373
- Ovens**  
Oven for heat treating heat shields [NASA-CASE-XMS-04318] c15 N69-27871  
Thermocouple, multiple junction reference oven [NASA-CASE-PRC-10112-1] c35 N81-26431
- OVERVOLTAGE**  
Spark gap type protective circuit for fast sensing and removal of overvoltage conditions [NASA-CASE-XAC-08981] c09 N69-39897  
Sensing circuit for instantaneous reaction to power overloads [NASA-CASE-GSC-10667-1] c10 N71-33129  
Overvoltage protection network [NASA-CASE-ARC-10197-1] c33 N74-17929  
Overload protection system for power inverter [NASA-CASE-NFO-13872-1] c33 N78-10377
- Oxazole**  
Preparation of heterocyclic block copolymer omega-diamidoximes [NASA-CASE-ARC-11060-1] c27 N79-22300  
The 1,2,4-oxadiazole elastomers --- heat resistant polymers [NASA-CASE-ARC-11253-1] c27 N81-17262
- OXIDATION**  
Silicide coating process and composition for protection of refractory metals from oxidation [NASA-CASE-XLE-10910] c18 N71-29040  
Automated analysis of oxidative metabolites [NASA-CASE-ARC-10469-1] c25 N75-12086  
Hydrogen rich gas generator [NASA-CASE-NFO-13464-2] c44 N76-29704  
Process of forming catalytic surfaces for wet oxidation reactions [NASA-CASE-MSC-14831-1] c25 N78-10225  
Compound oxidized styrylphosphine --- flame resistant vinyl polymers [NASA-CASE-MSC-14903-2] c27 N80-10358
- OXIDATION RESISTANCE**  
Nickel base alloy with resistance to oxidation at high temperatures and superior stress-rupture properties [NASA-CASE-XLE-02082] c17 N71-16026  
Method of protecting the surface of a substrate --- by applying aluminate coating [NASA-CASE-LEW-11696-1] c37 N75-13261  
Duplex aluminized coatings [NASA-CASE-LEW-11696-2] c26 N75-19408  
High temperature oxidation resistant cermet compositions [NASA-CASE-NPO-13666-1] c27 N77-13217  
High temperature resistant cermet and ceramic compositions [NASA-CASE-NPO-13690-2] c27 N79-14213  
Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications [NASA-CASE-LEW-11930-4] c24 N79-17916  
NiCrAl ternary alloy having improved cyclic oxidation resistance [NASA-CASE-LEW-13339-1] c26 N81-12211
- OXIDATION-REDUCTION REACTIONS**  
Electrochemical cell for rebalancing REDOX flow system [NASA-CASE-LEW-13150-1] c44 N79-26474  
Catalyst surfaces for the chromous/chromic redox couple [NASA-CASE-LEW-13148-1] c33 N80-20487
- OXIDE FILMS**  
Method for depositing an oxide coating --- producing solar panels [NASA-CASE-LEW-13131-1] c26 N81-24230  
Method of forming oxide coatings [NASA-CASE-LEW-13132-1] c44 N81-27616

## OXIDES

Utilization of lithium p-lithiophenoxide to  
prepare star polymers  
[NASA-CASE-NPO-10998-1] c06 N73-32029

## OXIDIZERS

Electrolytically regenerative hydrogen-oxygen  
fuel cells  
[NASA-CASE-XLE-04526] c03 N71-11052  
Fuel and oxidizer injection head for thrust  
chamber of reaction engine  
[NASA-CASE-NPO-10046] c28 N72-17843

## OXIMETRY

Ear oximeter for monitoring blood oxygenation  
and pressure, pulse rate, and pressure pulse  
curve, using dc and ac amplifiers  
[NASA-CASE-XAC-05422] c04 N71-23185

## OXYGEN

Analytical test apparatus and method for  
determining oxygen content in alkali liquid  
metal  
[NASA-CASE-XLE-01997] c06 N71-23527  
Heated tungsten filter for removing oxygen  
impurities from cesium  
[NASA-CASE-XNP-04262-2] c17 N71-26773  
Method for detecting oxygen in gas by  
thermoluminescence  
[NASA-CASE-LAR-10668-1] c06 N73-16106  
Method for obtaining oxygen from lunar or  
similar soil  
[NASA-CASE-MSC-12408-1] c46 N74-13011  
Nonflammable coating compositions --- for use in  
high oxygen environments  
[NASA-CASE-MFS-20486-2] c27 N74-17283

## OXYGEN CONSUMPTION

Respiration analyzing method and apparatus for  
determining subjects oxygen consumption in  
aerospace environments  
[NASA-CASE-IFR-06403] c05 N71-11202

## OXYGEN FLUORIDES

Utilization of oxygen difluoride for syntheses  
of fluoropolymers  
[NASA-CASE-NPO-12061-1] c27 N76-16228

## OXYGEN METABOLISM

Metabolic analyzer --- for measuring metabolic  
rate and breathing dynamics of human beings  
[NASA-CASE-MFS-21415-1] c52 N74-20728

## OXYGEN PLASMA

Oxygen post-treatment of plastic surface coated  
with plasma polymerized silicon-containing  
monomers  
[NASA-CASE-ARC-10915-2] c27 N79-18052

## OXYGEN REGULATORS

Lead-oxygen dc power supply system having a  
closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c44 N76-27664

## OXYGEN SUPPLY EQUIPMENT

Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c54 N76-24900

## OZONE

Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c25 N78-15210  
Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c45 N80-14579  
Curable liquid hydrocarbon prepolymers  
containing hydroxyl groups and process for  
producing same  
[NASA-CASE-NPO-13137-1] c27 N80-32514

## P

## P-N JUNCTIONS

Lithium drifted silicon radiation detector with  
gold rectifying contacts  
[NASA-CASE-XLE-10529] c14 N69-23191  
Semiconductor p-n junction on needle apex to  
provide stress and strain sensor  
[NASA-CASE-XLA-04980] c09 N69-27422  
Improving radiation resistance of silicon  
semiconductor junctions by doping with lithium  
[NASA-CASE-XGS-07801] c09 N71-12513  
Silicon radiation detecting probe design for in  
vivo biomedical use  
[NASA-CASE-XMS-01177] c05 N71-19440  
Electrode connection for n-on-p silicon solar cell  
[NASA-CASE-XLE-04787] c03 N71-20492  
Water content in vapor deposition atmosphere for  
forming n-type and p-type junctions of zinc  
doped gallium arsenide  
[NASA-CASE-XNP-01961] c26 N71-29156

Method for making semiconductor p-n junction  
stress and strain sensor  
[NASA-CASE-XLA-04980-2] c14 N72-28438  
Resin for protecting p-n semiconductor junction  
surface  
[NASA-CASE-ERC-10339-1] c18 N73-30532  
Method and apparatus for measuring minority  
carrier lifetimes and bulk diffusion length in  
p-n junction solar cells  
[NASA-CASE-NPO-14100-1] c44 N79-12541  
Back wall solar cell  
[NASA-CASE-LEW-12236-2] c44 N79-14528  
**P-TYPE SEMICONDUCTORS**  
Addition of group 3 elements to silicon  
semiconductor material for increased  
resistance to radiation damage in solar cells  
[NASA-CASE-XLP-02798] c26 N71-23654  
Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c33 N74-34638  
**PACKAGES**  
Impact testing machine for imparting large  
impact forces on high velocity packages  
[NASA-CASE-XNP-04817] c14 N71-23225  
One hand backpack harness  
[NASA-CASE-LAR-10102-1] c05 N72-23085  
**PACKAGING**  
Characteristics of device for folding thin  
flexible sheets into compact configuration  
[NASA-CASE-XLA-00137] c15 N70-33180  
Method of compactly packaging centrifugally  
expandable lightweight flexible reflector  
satellite  
[NASA-CASE-XLA-00138] c31 N70-37981  
Development and characteristics of system for  
skin packaging articles using thermoplastic  
film heating and vacuum operated equipment  
[NASA-CASE-MFS-20855] c15 N73-27405  
Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c44 N79-25482  
**PACKING DENSITY**  
Micropacked column for rapid chromatographic  
analysis using low gas flow rates  
[NASA-CASE-XNP-04816] c06 N69-39936  
**PACKINGS (SEALS)**  
Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c37 N76-22541  
**PAD**  
Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c37 N75-30562  
**PAINTS**  
Nitroaniline sulfate, intumescent paints  
[NASA-CASE-ARC-10099-1] c18 N71-15469  
Composition and production method of alkali  
metal silicate paint with ultraviolet  
reflection properties  
[NASA-CASE-XGS-04799] c18 N71-24183  
White paint production by heating impure  
aluminum silicate clay having low solar  
absorptance  
[NASA-CASE-XNP-02139] c18 N71-24184  
**PALLADIUM**  
Electrically conductive palladium containing  
polyimide films  
[NASA-CASE-LAR-12705-1] c33 N60-24549  
**PALLADIUM COMPOUNDS**  
Preventing pressure buildup in electrochemical  
cells by reacting palladium oxide with evolved  
hydrogen  
[NASA-CASE-XGS-01419] c03 N70-41864  
Separation of dissolved hydrogen from water and  
coating with palladium black  
[NASA-CASE-MSC-13335-1] c06 N72-31140  
**PANELS**  
Nut and bolt fastener permitting all-directional  
movement of skin sections with respect to  
supporting structure  
[NASA-CASE-XLA-01807] c15 N71-10799  
Multilayer insulation panels for cryogenic  
liquid containers  
[NASA-CASE-MFS-14023] c33 N71-25351  
Method and apparatus for fabricating solar cell  
panels  
[NASA-CASE-XNF-03413] c03 N71-26726  
Method for making pressurized meteoroid  
penetration detector panels  
[NASA-CASE-XLA-08916] c15 N71-29018  
Honeycomb panels of minimal surface, periodic  
tubule layers  
[NASA-CASE-ERC-10364] c18 N72-25540

- Pressurized panel meteoroid detector  
[NASA-CASE-XLA-08916-2] c14 N73-28487
- Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c35 N74-10415
- Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c18 N75-27040
- Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c24 N78-17149
- Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c44 N78-19599
- Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c44 N78-27515
- Aluminium or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c44 N80-16452
- Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c24 N81-13999
- PAPER (MATERIAL)**  
Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NFO-13847-2] c65 N79-17747
- PAPERS**  
Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c37 N77-19457
- PARA HYDROGEN**  
Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c34 N82-10358
- PARABOLIC ANTENNAS**  
Device for improving efficiency of parabolic horn antenna system for linearly polarized signals  
[NASA-CASE-XNP-00611] c09 N70-35219
- Drive system for parabolic tracking antenna with reversible motion and minimal backlash  
[NASA-CASE-NPO-10173] c15 N71-24696
- Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c33 N76-27472
- Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c31 N81-27324
- Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c32 N82-10287
- PARABOLIC REFLECTORS**  
Device for improving efficiency of parabolic reflector horn for linearly or circularly polarized waves  
[NASA-CASE-XNP-00540] c09 N70-35382
- Foldable, double cone and parabolic reflector system for solar ray concentration  
[NASA-CASE-XLA-04622] c03 N70-41580
- Self erecting parabolic reflector design for use in space  
[NASA-CASE-XMS-03454] c09 N71-20658
- Plural beam antenna with parabolic reflectors  
[NASA-CASE-GSC-11013-1] c09 N73-19234
- Multinode antenna feed system for microwave and broadband communication  
[NASA-CASE-GSC-11046-1] c07 N73-28013
- Single frequency, two feed dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11568-1] c32 N76-15329
- Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c44 N79-14526
- Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c44 N79-23481
- Solar concentrator  
[NASA-CASE-MFS-23727-1] c44 N80-14473
- Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c37 N81-22358
- PARABOLOID MIRRORS**  
Optical data processing system using paraboloidal reflecting surfaces  
[NASA-CASE-GSC-11296-1] c23 N73-30666
- Three mirror glancing incidence system for X-ray telescope  
[NASA-CASE-MFS-21372-1] c74 N74-27866
- Multiple-beam, high-power, precision pointing antenna system  
[NASA-CASE-NPO-15406-1] c33 N82-12345
- PARACHUTE DESCENT**  
Multiple parachute system for landing control of Apollo type spacecraft  
[NASA-CASE-XLA-06898] c02 N70-36804
- Parachute system for lowering manned spacecraft from post-reentry to ocean landing  
[NASA-CASE-XLA-00195] c02 N70-38009
- Piston in bore cutter for severing parachute control lines and sealing cable hole to prevent water leakage into load  
[NASA-CASE-XMS-04072] c15 N70-42017
- Development and operating principles of gas generator for deploying recovery parachutes from space capsules during atmospheric entry  
[NASA-CASE-LAR-10549-1] c31 N73-13898
- PARACHUTE FABRICS**  
Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators  
[NASA-CASE-LAR-10776-1] c02 N74-10034
- System for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c02 N81-14967
- PARACHUTES**  
System for controlling torque buildup in suspension of gondola connected to balloon by parachute shroud lines  
[NASA-CASE-GSC-11077-1] c02 N73-13008
- Deploy/release system --- model aircraft flight control  
[NASA-CASE-LAR-11575-1] c02 N76-16014
- System for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c02 N81-14967
- System and method for refurbishing and processing parachutes --- monorial conveyor system  
[NASA-CASE-KSC-11042-2] c02 N81-26073
- PARAGLIDERS**  
Multiple parachute system for landing control of Apollo type spacecraft  
[NASA-CASE-XLA-00898] c02 N70-36804
- PARALLAX**  
Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c35 N78-17357
- PARALLEL PLATES**  
Describing instrument capable of measuring true shear viscosity of liquids and viscoelastic materials  
[NASA-CASE-XNP-09462] c14 N71-17584
- Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c33 N79-21265
- Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c37 N81-22360
- PARALLEL PROCESSING (COMPUTERS)**  
Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c60 N79-20751
- Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c60 N79-27864
- PARALLELOGRAMS**  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c37 N81-22359
- PARAMETRIC AMPLIFIERS**  
Development of idler feedback system to reduce electronic noise problem in two parametric amplifiers  
[NASA-CASE-LAR-10253-1] c09 N72-25258
- Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c33 N74-32660
- PARAMETRIC FREQUENCY CONVERTERS**  
Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NFO-14444-1] c33 N81-15192
- PARAWINGS**  
Method for deployment of flexible wing glider from space vehicle with minimum impact and loading  
[NASA-CASE-XMS-00907] c02 N70-41630
- PARKING**  
Automated multi-level vehicle parking system  
[NASA-CASE-NPO-13058-1] c37 N77-22480
- PARTIAL PRESSURE**  
Equipment for measuring partial water vapor pressure in gas tank  
[NASA-CASE-XMS-01618] c14 N71-20741
- PARTICLE ACCELERATION**  
Selector mechanism for mechanical separation and discrimination of high velocity molecular particles  
[NASA-CASE-XLE-01533] c11 N71-10777
- Method and apparatus for use in forming highly collimated beam of microparticles with high charge to mass ratio and injecting beam into electrostatic accelerating tube  
[NASA-CASE-XGS-06628] c24 N71-16213
- PARTICLE ACCELERATOR TARGETS**  
Dispensing targets for ion beam particle

- generators  
[NASA-CASE-NFO-13112-1] c73 N74-26767
- Deuterium pass through target --- neutron emitting target  
[NASA-CASE-LEW-11866-1] c72 N76-15860
- Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c31 N78-17237
- PARTICLE BEAMS**  
Particle beam power density detection and measurement apparatus  
[NASA-CASE-XLE-00243] c14 N70-38602
- Doppler shift system --- system for measuring velocities of radiating particles  
[NASA-CASE-HQN-10740-1] c72 N74-19310
- PARTICLE COLLISIONS**  
Momentum-velocity analyzer for measuring minute space particles  
[NASA-CASE-XMS-04201] c14 N71-22990
- PARTICLE DENSITY (CONCENTRATION)**  
Particle detector for measuring micrometeoroid velocity in space  
[NASA-CASE-XLA-00495] c14 N70-41332
- PARTICLE EMISSION**  
Mosaic semiconductor radiation detector and position indicator systems engineering for low energy particles  
[NASA-CASE-XGS-03230] c14 N71-23401
- Apparatus for detecting particle emission lower than noise level of multiplier tube  
[NASA-CASE-XLA-07813] c14 N72-17328
- PARTICLE ENERGY**  
Particle detector for indicating incidence and energy of minute space particles  
[NASA-CASE-XLA-00135] c14 N70-33322
- Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c35 N76-22509
- PARTICLE MASS**  
Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c35 N76-15431
- Microbalance --- for measuring particle mass  
[NASA-CASE-MSC-11242] c35 N78-17358
- PARTICLE MOTION**  
Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c35 N76-16393
- PARTICLE PRODUCTION**  
Production of I-123  
[NASA-CASE-LEW-11390-3] c25 N76-29379
- PARTICLE SIZE DISTRIBUTION**  
Micropacked column for rapid chromatographic analysis using low gas flow rates  
[NASA-CASE-XNP-04816] c06 N69-35936
- Apparatus for producing hydrocarbon slurry containing small particles of magnesium for use as jet aircraft fuel  
[NASA-CASE-XLE-00010] c15 N70-33382
- Production of high strength refractory compounds and microconstituents into refractory metal matrix  
[NASA-CASE-XLE-C3940] c18 N71-26153
- Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c37 N75-19683
- Apparatus for handling micron size range particulate material  
[NASA-CASE-NFO-10151] c37 N78-17386
- Frequency-scanning particle size spectrometer  
[NASA-CASE-NFO-13606-2] c35 N80-18364
- Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c25 N81-19242
- Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c44 N81-27615
- PARTICLE TRAJECTORIES**  
Micrometeoroid velocity and trajectory analyzer  
[NASA-CASE-GSC-11892-1] c35 N76-15433
- Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c36 N81-24422
- PARTICLES**  
Development of device for separating, collecting, and viewing soil particles  
[NASA-CASE-XNP-09770] c15 N71-20440
- Development of apparatus for producing metal powder particles of controlled size  
[NASA-CASE-XLE-06461-2] c17 N72-28535
- Particle parameter analyzing system --- x-y plotter circuits and display  
[NASA-CASE-XLF-06094] c33 N78-17293
- Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPC-13904-1] c25 N79-11152
- PARTICULATE SAMPLING**  
Development and operation of apparatus for sampling particulates in gases in upper atmosphere  
[NASA-CASE-HQN-10037-1] c14 N73-27376
- Electrophoretic sample insertion --- device for uniformly distributing samples in flow path  
[NASA-CASE-MFS-21395-1] c25 N74-26948
- Sampler of gas borne particles  
[NASA-CASE-NFO-13396-1] c35 N76-18401
- Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c35 N79-17192
- Biocontamination and particulate detection system  
[NASA-CASE-NFO-13953-1] c35 N79-28527
- PASSAGEWAYS**  
Space expandable tether device for use as passageway between two docked spacecraft  
[NASA-CASE-XMS-10993] c15 N71-28936
- PASSIVE SATELLITES**  
Erectable, inflatable, radio signal reflecting passive communication satellite  
[NASA-CASE-XLA-00210] c30 N70-40309
- Apparatus for measuring backscatter and transmission characteristics of sample segment of large spherical passive satellites  
[NASA-CASE-XGS-02608] c07 N70-41678
- Forming inflatable panels erectable in space for passive communication satellite  
[NASA-CASE-XLA-03497] c15 N71-23052
- PATIENTS**  
Stretcher with rigid head and neck support with capability of supporting immobilized person in vertical position for removal from vehicle hatch to exterior also useful as splint stretcher  
[NASA-CASE-XMF-06589] c05 N71-23159
- PATTERN RECOGNITION**  
Roughness detector for recording surface pattern of irregularities  
[NASA-CASE-XLA-00203] c14 N70-34161
- Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c71 N74-21014
- Optical signature generating and correlating apparatus  
[NASA-CASE-NPC-15226-1] c74 N81-19899
- PAYLOAD RETRIEVAL (STS)**  
Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c74 N79-13855
- Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c18 N81-24164
- PAYLOADS**  
Plastic foam generator for space vehicle instrument payload package flotation in water landing  
[NASA-CASE-XLA-00838] c03 N70-36778
- Stage separation system for spinning vehicles and payloads  
[NASA-CASE-XLA-02132] c31 N71-10582
- Payload/spent rocket engine case separation system  
[NASA-CASE-XLA-05369] c31 N71-15687
- High velocity guidance and spin stabilization gyro controlled jet reaction system for launch vehicle payloads  
[NASA-CASE-XLA-01339] c31 N71-15692
- Payload soft landing system using stowable gas bag  
[NASA-CASE-XLA-09881] c31 N71-16085
- Zero gravity apparatus utilizing pneumatic decelerating means to create payload subjected to zero gravity conditions by dropping its height  
[NASA-CASE-XMF-06515] c14 N71-23227
- PCM TELEMETRY**  
Variable time constant, wide frequency range smoothing network for noise removal from pulse chains  
[NASA-CASE-XGS-01983] c10 N70-41964
- Data acquisition and processing system with buffer storage and timing device for magnetic tape recording of PCM data and timing information  
[NASA-CASE-NFO-12107] c08 N71-27255
- High speed direct binary to binary coded decimal converter for use in PCM telemetry systems

- [NASA-CASE-KSC-10326] c08 N72-21197
- PEELING**
- Wire stripper  
[NASA-CASE-FRC-10111-1] c37 N79-10419
- PELLETS**
- Supporting structure for simultaneous exposure of pellets to X rays  
[NASA-CASE-XNP-06031] c15 N71-15606
- PELTIER EFFECTS**
- Use of silicon controlled rectifier shorting circuit to protect thermoelectric generator source from thermal destruction  
[NASA-CASE-XGS-04808] c03 N69-25146
- PENETRANTS**
- Dye penetrant and technique for nondestructive tests of solid surfaces contacted by liquid oxygen  
[NASA-CASE-XMF-02221] c18 N71-27170
- PENETRATION**
- Method and device for detection of surface discontinuities or defects.  
[NASA-CASE-MSC-14187-1] c35 N74-32879
- Fire extinguishing apparatus having a slidable mass for a penetrator puzzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c31 N81-14137
- PENETROMETERS**
- Development and characteristics of penetrometer for measuring physical properties of lunar surface  
[NASA-CASE-XLA-00934] c14 N71-22765
- Portable penetrometer for analyzing soil characteristics  
[NASA-CASE-MFS-20774] c14 N73-19420
- Auger-type soil penetrometer for burrowing into soil formations  
[NASA-CASE-XNP-05530] c14 N73-32321
- Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NFO-11103-1] c35 N77-27367
- Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c43 N79-25443
- PERCEPTION**
- Measuring method for cutaneous perception using instrument with elongated tubular housing  
[NASA-CASE-MSC-13609-1] c05 N72-25122
- PERFLUORO COMPOUNDS**
- Chemical synthesis of hydroxy terminated perfluoro ethers as intermediates for highly fluorinated polyurethane resins  
[NASA-CASE-NFO-10768] c06 N71-27254
- Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-16765] c06 N72-20121
- Reaction of polyperfluoropolyenes with fluorine to produce saturated polymer chain or create reactive sites on chain  
[NASA-CASE-NFO-10862] c06 N72-22107
- Silphenylenesiloxane polymer with in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c06 N72-25151
- Polymerization of perfluorobutadiene  
[NASA-CASE-NPO-10863-2] c06 N72-25152
- Formation of polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c06 N72-27144
- Process for preparing disilanol with in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979-2] c06 N73-32030
- Perfluoro alkylene dioxy-bis-(4-phthalic anhydrides and oxy-bis-(perfluoroalkyleneoxyphthalic anhydrides  
[NASA-CASE-MFS-22356-1] c23 N75-30256
- Preparation of perfluorinated imidicylamidoximes --- for eventual preparation of heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-1] c23 N80-26386
- Preparation of perfluorinated 1,2,4-oxadiazoles --- heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-2] c25 N80-26407
- PERFLUOROALKANE**
- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c27 N79-22300
- PERFORATED PLATES**
- Helium outgassing process for fused glass coating on ion accelerator grid  
[NASA-CASE-LEW-10278-1] c15 N71-28582
- PERFORATED SHELLS**
- Method of fabricating an article with cavities --- with thin bottom walls  
[NASA-CASE-LAB-10318-1] c31 N74-18089
- PERFORMANCE PREDICTION**
- Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c04 N76-26175
- PERFORMANCE TESTS**
- Flexible, frangible electrochemical cell and package for operation in low temperature environment  
[NASA-CASE-XGS-10010] c03 N72-15986
- Test method and equipment for identifying faulty cells or connections in solar cell assemblies  
[NASA-CASE-NPO-10401] c03 N72-20033
- Development of apparatus for detonating explosive devices in order to determine forces generated and detonation propagation rate  
[NASA-CASE-LAB-10800-1] c33 N72-27959
- PERIODIC VARIATIONS**
- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c35 N77-20401
- PERMEABILITY**
- Water insoluble, cationic permselective membrane  
[NASA-CASE-NPO-11091] c18 N72-22567
- System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c39 N80-10507
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NFC-14101-1] c52 N80-14687
- Geological assessment probe  
[NASA-CASE-NFO-14558-1] c46 N80-24906
- Absorbent product and articles made therefrom --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c24 N81-16127
- PEROXIDES**
- Low pressure perfluorobutadiene polymerization with peroxide catalysts  
[NASA-CASE-NPO-10447] c06 N70-11252
- PERSPIRATION**
- Manufacturing process for making perspiration resistant-stress resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c05 N72-25120
- Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c52 N81-29763
- PERTURBATION**
- Absorbing gas reactivity control system for minimizing power distribution and perturbation in nuclear reactors  
[NASA-CASE-XLF-04599] c22 N72-20597
- PERTURBATION THEORY**
- Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c35 N75-16783
- PHASE COHERENCE**
- Apparatus for estimating amplitude and sign of phase difference or time lag between two signals  
[NASA-CASE-NFO-11203] c10 N72-20224
- Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NFO-11921-1] c32 N74-30523
- PHASE CONTROL**
- System designed to reduce time required for obtaining synchronization in data communication with spacecraft utilizing pseudonoise codes  
[NASA-CASE-NPO-10214] c10 N71-26577
- Wideband voltage controlled oscillator with high phase stability  
[NASA-CASE-XLA-03893] c10 N71-27271
- Voltage controlled oscillator circuit for two-phase induction motor control  
[NASA-CASE-MFS-21465-1] c10 N73-32145
- System for generating timing and control signals  
[NASA-CASE-NFO-13125-1] c33 N75-19519
- Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c33 N81-17349
- Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c33 N81-27402
- Systems for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c71 N82-11861

## PHASE DEMODULATORS

Development of phase demodulation system with  
two phase locked loops  
[NASA-CASE-XNP-00777] c10 N71-19469  
Linear phase demodulator including a phase  
locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c33 N77-14334

## PHASE DETECTORS

Detector assembly for discriminating first  
signal with respect to presence or absence of  
second signal at time of occurrence of first  
signal  
[NASA-CASE-XMF-00701] c09 N70-40272  
Bipolar phase detector and corrector for split  
phase PCM data signals  
[NASA-CASE-XGS-01590] c07 N71-12392  
High speed phase detector design indicating  
phase relationship between two square wave  
input signals  
[NASA-CASE-XNP-01306-2] c09 N71-24596  
Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c33 N74-14956  
Low distortion automatic phase control circuit  
--- voltage controlled phase shifter  
[NASA-CASE-MFS-21671-1] c33 N74-22685  
Correlation type phase detector --- with time  
correlation integrator for frequency  
multiplexed signals  
[NASA-CASE-GSC-11744-1] c33 N75-26243  
Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c35 N75-27331  
Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c33 N77-13315  
Phase substitution of spare converter for a  
failed one of parallel phase staggered  
converters  
[NASA-CASE-NPO-13812-1] c33 N77-30365  
Apparatus and method for stabilized phase  
detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c33 N79-11313  
Receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c32 N81-16338  
High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c33 N81-31482  
Phase sensitive guidance sensor for  
wire-following vehicles  
[NASA-CASE-NPO-15341-1] c33 N82-12346

## PHASE DEVIATION

System for stabilizing cable phase delay  
utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c33 N74-17927

## PHASE LOCK DEMODULATORS

Phase locked demodulator with bandwidth  
switching amplifier circuit  
[NASA-CASE-XNP-01107] c10 N71-28659

## PHASE LOCKED SYSTEMS

System for phase locking onto carrier frequency  
signal located within receiver bandpass  
[NASA-CASE-XGS-04994] c09 N69-21543  
Phase locked loop with sidelobe rejecting  
properties in continuous wave tracking radar  
[NASA-CASE-XNP-02723] c07 N70-41680  
Development of automatic frequency  
discriminators and control for phase lock loop  
providing frequency preset capabilities  
[NASA-CASE-XMF-08665] c10 N71-19467  
Development and characteristics of burst  
synchronization detection system  
[NASA-CASE-XMS-05605-1] c10 N71-19468  
Development of phase demodulation system with  
two phase locked loops  
[NASA-CASE-XNP-00777] c10 N71-19469  
Diversity receiving system with diversity phase  
lock  
[NASA-CASE-XGS-01222] c10 N71-20841  
Phase locked phase modulation system with  
voltage controlled oscillator for final phase  
linearity  
[NASA-CASE-XNP-05382] c10 N71-23544  
Video sync processor with phase locked system  
[NASA-CASE-KSC-10002] c10 N71-25865  
Characteristics of data-aided carrier tracking  
loop used for tracking carrier in angle  
modulated communications system  
[NASA-CASE-NPO-11282] c10 N73-16205  
Filter for third order phase locked loops in  
signal receivers  
[NASA-CASE-NPO-11941-1] c10 N73-27171

Improved phase lock loop for receiver in  
multichannel telemetry system with suppressed  
carrier  
[NASA-CASE-NFO-11593-1] c07 N73-28012  
Automatic carrier acquisition system for phase  
locked loop receiver  
[NASA-CASE-NFC-11628-1] c07 N73-30113  
Phase-locked servo system --- for synchronizing  
the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c33 N75-13139  
Low speed phaselock speed control system --- for  
brushless dc motor  
[NASA-CASE-GSC-11127-1] c09 N75-24758  
Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c33 N75-25040  
Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c17 N76-22245  
Discriminator aided phase lock acquisition for  
suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c32 N79-14276  
Frequency translating phase conjugation circuit  
for active retrodirective antenna array ---  
microwave transmission  
[NASA-CASE-NPO-14536-1] c32 N81-14185  
PN lock indicator for dithered PN code tracking  
loop  
[NASA-CASE-NPO-14435-1] c33 N81-33405

## PHASE MODULATION

Plural channel data transmission system with  
quadrature modulation and complementary  
demodulation  
[NASA-CASE-XAC-06302] c08 N71-19763  
Adaptive notch filter, using modulation  
techniques for reversed phase noise signal  
[NASA-CASE-XMF-01892] c10 N71-22986  
Phase locked phase modulation system with  
voltage controlled oscillator for final phase  
linearity  
[NASA-CASE-XNP-05382] c10 N71-23544  
Scanning signal phase and amplitude electronic  
control device with hybrid T waveguide junction  
[NASA-CASE-NFO-10302] c10 N71-26142  
Phase modulator with tuned variable length  
electrical lines including coupling and  
varactor diode circuits  
[NASA-CASE-MSC-13201-1] c07 N71-28429  
Multicarrier communications system for  
transmitting modulated signals from single  
transmitter  
[NASA-CASE-NPO-11548] c07 N73-26118  
Decision feedback loop for tracking a polyphase  
modulated carrier  
[NASA-CASE-NPO-13103-1] c32 N74-20811  
Modulator for tone and binary signals --- phase  
or modulation of tone and binary signals on  
carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c32 N75-24981  
Phase modulating with odd and even finite power  
series of a modulating signal  
[NASA-CASE-LAB-11607-1] c32 N77-14292  
Swept group delay measurement  
[NASA-CASE-NPC-13909-1] c33 N78-25319  
Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c33 N78-32338  
Closed Loop solar array-ion thruster system with  
power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179  
Receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c32 N81-16338  
Baseband signal combiner for large aperture  
antenna array  
[NASA-CASE-NFC-14641-1] c32 N81-29308  
Doppler radar having phase modulation of both  
transmitted and reflected return signals ---  
ranging  
[NASA-CASE-MSC-18675-1] c32 N81-29312

## PHASE SHIFT

Bipolar phase detector and corrector for split  
phase PCM data signals  
[NASA-CASE-XGS-01590] c07 N71-12392  
Left and right hand circular electromagnetic  
polarization excitation by phase shifter and  
hybrid networks  
[NASA-CASE-GSC-10021-1] c09 N71-24595  
Pulse code modulated data from frequency  
multiplex communications by digital phase  
shift or carrier  
[NASA-CASE-NFO-11338] c08 N72-25208

- Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c33 N79-10338
- Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c37 N81-17432
- PHASE SHIFT CIRCUITS**
- Design of gyrator circuit using operational amplifiers to replace ungrounded inductors  
[NASA-CASE-XAC-10608-1] c09 N71-12517
- Phase shifting circuit for selecting phase of input signal  
[NASA-CASE-ARC-10269-1] c10 N72-16172
- Continuously variable, voltage-controlled phase shifter  
[NASA-CASE-NPO-11129] c09 N72-33204
- Voltage controlled oscillator circuit for two-phase induction motor control  
[NASA-CASE-MFS-21465-1] c10 N73-32145
- Low distortion automatic phase control circuit --- voltage controlled phase shifter  
[NASA-CASE-MFS-21671-1] c33 N74-22885
- Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c32 N81-15179
- PHASE SHIFT KEYING**
- Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c32 N74-20811
- Differential phase shift keyed communication system  
[NASA-CASE-MSC-14065-1] c32 N74-26654
- Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c33 N74-27705
- Unbalanced quadriphase demodulator  
[NASA-CASE-MSC-14840-1] c32 N77-24331
- Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c33 N81-15192
- PHASE SWITCHING INTERFEROMETERS**
- Interferometric tuning acquisition and tracking radar antenna system  
[NASA-CASE-XMS-09610] c07 N71-24625
- PHASE TRANSFORMATIONS**
- Magnetohydrodynamic generator for mixing nonconductive gas and liquid metal mist to form slugs  
[NASA-CASE-XLE-02083] c03 N69-39983
- Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment  
[NASA-CASE-XLE-01182] c27 N71-15635
- PHASE VELOCITY**
- Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAK-11435-1] c35 N76-15432
- PHASED ARRAYS**
- Development of phase control coupling for use with phased array antenna  
[NASA-CASE-ERC-10285] c10 N73-16206
- Phased array antenna control  
[NASA-CASE-MSC-14939-1] c32 N79-11264
- Phase conjugation method and apparatus for an active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c32 N79-24210
- Complementary cross-slot phased array antenna  
[NASA-CASE-MSC-18532-1] c32 N80-29543
- Coaxial phased array antenna  
[NASA-CASE-MSC-16860-1] c32 N81-14187
- Multiple-beam, high-power, precision pointing antenna system  
[NASA-CASE-NPO-15406-1] c33 N82-12345
- PHASED LOCKED SYSTEMS**
- Bit synchronization system using digital data transition tracking phased locked loop  
[NASA-CASE-NPO-16844] c07 N72-20140
- Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c35 N74-12887
- Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c33 N77-14334
- PHENOLIC RESINS**
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAK-10337-1] c24 N75-30260
- PHENOLS**
- Utilization of lithium p-lithiophenoxide to prepare star polymers  
[NASA-CASE-NPO-16998-1] c06 N73-32029
- Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c25 N79-22235
- PHONOCARDIOGRAPHY**
- Phonocardiogram simulator producing electrical voltage waves to control amplitude and duration between simulated sounds  
[NASA-CASE-XKS-10804] c05 N71-24606
- Vibrophonocardiograph comprising low weight and small volume piezoelectric microphone with amplifier having high input impedance for high sensitivity and low frequency response  
[NASA-CASE-XFB-07172] c05 N71-27234
- PHOSPHATES**
- Low concentration alkaline solution treatment of aluminum with metal phosphate surface coatings to improve chemical bonding and reduce coating weight  
[NASA-CASE-XLA-01995] c18 N71-23047
- PHOSPHAZENE**
- Process for the preparation of polycarboranylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c27 N81-27271
- PHOSPHINES**
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-1] c27 N78-32256
- Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c27 N80-10358
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c27 N80-24438
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c27 N81-31364
- PHOSPHONITRILES**
- Chemical synthesis of thermally stable organometallic polymers with divalent metal ion and tetraphenylphosphonitrilic units  
[NASA-CASE-HQN-10364] c06 N71-27363
- PHOSPHORS**
- Cathode ray tube with coating of phosphor and cobalt oxides  
[NASA-CASE-ERC-10468] c09 N72-20206
- PHOSPHORUS COMPOUNDS**
- Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c27 N81-27272
- PHOSPHORUS POLYMERS**
- Process for the preparation of polycarboranylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c27 N81-27271
- PHOTOABSORPTION**
- Photomechanical transducer  
[NASA-CASE-NFC-14363-1] c39 N81-25400
- PHOTOCATHODES**
- Spectrometer using photoelectric effect to obtain spectral data  
[NASA-CASE-XNP-04161] c14 N71-15599
- III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c33 N76-31409
- PHOTOCHEMICAL REACTIONS**
- Apparatus for photon excited catalysis  
[NASA-CASE-NFO-13566-1] c25 N77-32255
- Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c25 N78-25148
- Vitro-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c27 N80-26446
- PHOTOCONDUCTIVE CELLS**
- Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c60 N77-14751
- Plural output optometric sample cell and analysis system  
[NASA-CASE-NFC-10233-1] c74 N78-33913
- PHOTOCONDUCTIVITY**
- Photofabrication techniques for selective removal of conductive metals oxide coatings from nonconductive substrates  
[NASA-CASE-ERC-10108] c06 N72-21094
- PHOTOCONDUCTORS**
- Electronic divider and multiplier for analog

- electric signals  
[NASA-CASE-XFR-05637] c09 N71-19480
- PHOTODIODES**  
Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c37 N79-28549
- PHOTODISSOCIATION**  
Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LRW-12465-1] c25 N78-25148
- PHOTOELECTRIC CELLS**  
Sun tracker with rotatable plane-parallel plate and two photocells  
[NASA-CASE-XGS-01159] c21 N71-10678  
Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
[NASA-CASE-NPO-12127-1] c91 N74-13130  
Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c74 N80-21138
- PHOTOELECTRIC EFFECT**  
Spectrometer using photoelectric effect to obtain spectral data  
[NASA-CASE-XNP-04161] c14 N71-15599
- PHOTOELECTRIC EMISSION**  
High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NFO-14078-1] c72 N80-14877
- PHOTOELECTRIC MATERIALS**  
Light radiation direction indicator with baffle of two parallel grids  
[NASA-CASE-XNP-03930] c14 N69-24331  
Use of thin film light detector  
[NASA-CASE-NFO-11432-2] c35 N74-15090
- PHOTOELECTRICITY**  
Photoelectric detection system  
[NASA-CASE-MFS-23776-1] c74 N80-25134
- PHOTOELECTRON SPECTROSCOPY**  
Photoelectron spectrometer with means for stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c35 N78-10429  
High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NFO-14078-1] c72 N80-14877  
Low intensity X-ray and gamma-ray imaging spectrometer  
[NASA-CASE-GSC-12587-1] c35 N80-29635
- PHOTOGRAPHIC EMULSIONS**  
Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c27 N81-25209  
Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c35 N82-11432
- PHOTOGRAPHIC EQUIPMENT**  
Camera protecting device for use in photographing rocket engine nozzles or other engine components  
[NASA-CASE-NPO-10174] c14 N71-18465  
Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c27 N77-32308  
Film advance indicator  
[NASA-CASE-LAR-12474-1] c35 N80-31774  
System for forming a quadrified image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c74 N81-17886
- PHOTOGRAPHIC FILM**  
Longitudinal film gate and lock mechanism for securing film in motion picture cameras under vibration and high acceleration loads  
[NASA-CASE-LAR-10686] c14 N71-28935  
Mechanical exposure interlock device for preventing film overexposure in oscilloscope camera  
[NASA-CASE-LAR-10319-1] c14 N73-32322  
Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-MSC-12640-1] c74 N76-31998  
Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c35 N78-15461  
Method for retarding dye fading during archival storage of developed color photographic film
- inert atmosphere  
[NASA-CASE-MFS-23250-1] c35 N82-11432
- PHOTOGRAPHIC MEASUREMENT**  
Photographic method for measuring viscoelastic strain in solid propellants and other materials  
[NASA-CASE-XNP-01153] c32 N71-17645  
Impact measuring technique for determining size of hypervelocity projectiles  
[NASA-CASE-LAR-10913] c14 N72-16282  
TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c39 N78-16387
- PHOTOGRAPHIC PROCESSING**  
Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c74 N77-28932  
Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c35 N79-10389
- PHOTOGRAPHIC PROCESSING EQUIPMENT**  
Drying chamber for photographic sheet material  
[NASA-CASE-GSC-11074-1] c14 N73-28489
- PHOTOGRAPHIC RECORDING**  
Photographing surface flow patterns on wind tunnel test models  
[NASA-CASE-XLA-01353] c14 N70-41366  
Development of focused image holography with extended sources  
[NASA-CASE-ERC-10019] c16 N71-15551  
Recording and reconstructing focused image holograms  
[NASA-CASE-ERC-10017] c16 N71-15567  
Method and means for recording and reconstructing holograms without use of reference beam  
[NASA-CASE-ERC-10020] c16 N71-26154  
Multiple image storing system for obtaining holographic record on film of high speed projectile  
[NASA-CASE-MFS-20596] c14 N72-17324  
Phototropic composition of matter with sensitivity to ultraviolet light and usable for producing positive photographic images  
[NASA-CASE-XGS-03736] c14 N72-22443  
Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c25 N74-18551
- PHOTOGRAPHY**  
System for forming a quadrified image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPC-14219-1] c74 N81-17886
- PHOTOIONIZATION**  
Multichannel photoionization chamber for measuring absorption, photoionization yield, and coefficients of gases  
[NASA-CASE-ERC-10044-1] c14 N71-27090
- PHOTOLYSIS**  
Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c44 N77-32580  
Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c44 N79-11470
- PHOTOMAPPING**  
Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c74 N77-10899
- PHOTOMASKS**  
Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c27 N81-25209
- PHOTOMECHANICAL EFFECT**  
Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c39 N81-25400
- PHOTOMETERS**  
Michelson interferometer with photodetector for optical direction sensing  
[NASA-CASE-NFO-10320] c14 N71-17655  
Indicator device for monitoring charge of wet cell battery, using semiconductor light emitter and photodetector  
[NASA-CASE-NPO-10194] c03 N71-20407  
Electro-optical detector for determining position of light source  
[NASA-CASE-XNP-01059] c23 N71-21821  
Photometric flow meter with comparator reference means  
[NASA-CASE-XGS-01331] c14 N71-22996  
Development of radiant energy sensor to detect the radiant energy wavelength bands from



- portions of radiating body  
[NASA-CASE-ERC-10174] c14 N72-25409
- Characteristics of infrared photodetectors  
manufactured from semiconductor material  
irradiated by electron beam  
[NASA-CASE-LAR-10728-1] c14 N73-12445
- Chromato-fluorographic drug detector --- device  
for detecting and recording fluorescent  
properties of materials  
[NASA-CASE-ARC-10633-1] c25 N74-26947
- The 2 deg/90 deg laboratory scattering photometer  
--- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c74 N78-13874
- Magneto-optic detection system with noise  
cancellation  
[NASA-CASE-NPO-11954-1] c35 N78-29421
- PHOTOMICROGRAPHY**
- Stereo photomicrography system with stereo  
microscope for viewing specimen at various  
magnifications  
[NASA-CASE-LAR-10176-1] c14 N72-20380
- Hand-held, lightweight, portable photomicroscope  
[NASA-CASE-ARC-10468-1] c14 N73-33361
- PHOTOMULTIPLIER TUBES**
- Photomultiplier detector of Canopus for  
spacecraft attitude control  
[NASA-CASE-XNP-03914] c21 N71-10771
- Electronic divider and multiplier for analog  
electric signals  
[NASA-CASE-XPR-05637] c09 N71-19480
- Apparatus for detecting particle emission lower  
than noise level of multiplier tube  
[NASA-CASE-XIA-07813] c14 N72-17328
- Scan oscilloscope for mapping surface  
sensitivity of photomultiplier tube  
[NASA-CASE-LAR-10320-1] c09 N72-23172
- Design and development of light sensing device  
for controlling orientation of object relative  
to sun or other light source  
[NASA-CASE-NPO-11201] c14 N72-27409
- Photomultiplier circuit including means for  
rapidly reducing the sensitivity thereof ---  
and protection from radiation damage  
[NASA-CASE-ARC-10593-1] c33 N74-27682
- PHOTON BEAMS**
- Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c25 N77-32255
- PHOTONS**
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c44 N78-25527
- PHOTOSENSITIVITY**
- Photosensitive light source device for detecting  
unmanned spacecraft deviation from reference  
attitude  
[NASA-CASE-XNP-00438] c21 N70-35089
- Light sensitive control system for automatically  
opening and closing dome of solar optical  
telescope  
[NASA-CASE-MSC-10966] c14 N71-19568
- Scan oscilloscope for mapping surface  
sensitivity of photomultiplier tube  
[NASA-CASE-LAR-10320-1] c09 N72-23172
- Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c35 N74-26946
- Apparatus for calibrating an image dissector tube  
[NASA-CASE-MFS-22208-1] c33 N75-26244
- PHOTOTRANSISTORS**
- Phototransistor imaging system with mosaic of  
phototransistors on semiconductor substrate  
[NASA-CASE-MFS-20809] c23 N73-13660
- Phototransistor with base collector junction  
diode for integration into photo sensor arrays  
[NASA-CASE-MFS-20407] c09 N73-19235
- PHOTOTROPISM**
- Phototropic composition of matter with  
sensitivity to ultraviolet light and usable  
for producing positive photographic images  
[NASA-CASE-IGS-03736] c14 N72-22443
- PHOTOVISCOELASTICITY**
- Photographic method for measuring viscoelastic  
strain in solid propellants and other materials  
[NASA-CASE-XNP-01153] c32 N71-17645
- PHOTOVOLTAIC CELLS**
- Sensor consisting of photocells mounted on  
pyramidal base for improved pointing  
accuracy of planetary trackers  
[NASA-CASE-XNP-04180] c07 N69-39736
- Light sensitive digital aspect sensor for  
attitude control of earth satellites or space  
probes  
[NASA-CASE-IGS-00359] c14 N70-34158
- Method of producing output voltage from  
photovoltaic cell using poly-N-vinyl carbazole  
complexed with iodine  
[NASA-CASE-NPO-10373] c03 N71-18698
- Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c35 N74-15090
- Photovoltaic cell array  
[NASA-CASE-MFS-22458-1] c44 N77-10635
- Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c44 N79-11467
- Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c44 N79-25482
- Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c44 N79-26475
- Solar cell with improved N-region contact and  
method of forming the same  
[NASA-CASE-NPO-14205-1] c44 N79-31752
- Method of fabricating a photovoltaic module of a  
substantially transparent construction  
[NASA-CASE-NPO-14303-1] c44 N80-18550
- Improving the efficiency of silicon solar cells  
containing chromium  
[NASA-CASE-NPO-15179-1] c44 N80-32850
- Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c35 N81-12388
- High voltage planar multijunction --- solar cells  
[NASA-CASE-LEW-13400-1] c44 N81-16528
- High voltage V-groove solar cell  
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[NASA-CASE-MPS-22671-2] c35 N77-17426  
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[NASA-CASE-NPO-10872-1] c35 N79-16246
- PLENUM CHAMBERS**  
Platform with several ground effect pads and plenum chambers  
[NASA-CASE-MPS-14685] c31 N71-15689  
Development of filter apparatus for gas separation and characteristics of filter cell support frame for improved operation  
[NASA-CASE-MSC-12297] c14 N72-23457  
Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c51 N81-14605
- PLETHYSMOGRAPHY**  
Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525  
Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c52 N81-24716
- PLOTTERS**  
Plotter device for automatically drawing equipotential lines on sheet of resistance paper  
[NASA-CASE-NPO-11134] c09 N72-21246  
Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c32 N81-27341
- PLOTTING**  
Instrument for measuring potentials on two dimensional electric field plot  
[NASA-CASE-XLA-08493] c10 N71-19421
- PLUG NOZZLES**  
Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c07 N76-18117
- PLUGS**  
Rocket chamber leak test fixture using tubular plug  
[NASA-CASE-XFR-09479] c14 N69-27503  
Fatigue resistant shear pin with hollow shaft and two plugs  
[NASA-CASE-XLA-09122] c15 N69-27505  
Control of gas flow from pressurized vessel by thermal expansion of metal plug  
[NASA-CASE-NPO-10298] c12 N71-17661  
Heated porous plug microthruster for spacecraft reaction jet controlled systems such as fuel flow regulation, propellant disassociation, and heat transfer augmentation  
[NASA-CASE-GSC-10640-1] c28 N72-18766
- PNEUMATIC CONTROL**  
Pneumatic system for cyclic control of fluid flow in pneumatic device  
[NASA-CASE-XMS-04843] c03 N69-21469  
Pneumatic control of telescopic mirror support system  
[NASA-CASE-XLA-03271] c11 N69-24321  
Actuator using compressed gas as driving force to control valve handling large liquid flows  
[NASA-CASE-XHQ-01208] c15 N70-35409  
Pneumatic mechanism for releasing hook and loop fasteners between large rigid structures  
[NASA-CASE-XMS-10660-1] c15 N71-25975  
Pneumatic foot pedal operated fluidic exercising device  
[NASA-CASE-MSC-11561-1] c05 N73-32014  
Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c37 N75-32465
- PNEUMATIC EQUIPMENT**  
Development and characteristics of high pressure control valve  
[NASA-CASE-MSC-11010] c15 N71-19485  
Pneumatic cantilever beams and platform for space erectable structure  
[NASA-CASE-XLA-01731] c32 N71-21045  
Fluid transferring system design for purging toxic, corrosive, or noxious fluids and fumes from materials handling equipment for cleansing and accident prevention  
[NASA-CASE-XMS-01905] c12 N71-21089  
Zero gravity apparatus utilizing pneumatic decelerating means to create payload subjected to zero gravity conditions by dropping its height  
[NASA-CASE-XMF-06515] c14 N71-23227  
Pneumatic servoamplifier for controlling flow regulation  
[NASA-CASE-MSC-12121-1] c15 N71-27147  
Inflatable stabilizing system for use on life raft to reduce rocking and preclude capsizing  
[NASA-CASE-MSC-12393-1] c02 N73-26006  
Airlock  
[NASA-CASE-MPS-20922-1] c18 N74-22136  
Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c37 N75-32465  
Improved tire/wheel concept --- pneumatic aircraft tire  
[NASA-CASE-LAR-11695-2] c37 N80-18402  
System for moving a probe to follow movements of tissue  
[NASA-CASE-NFO-15197-1] c52 N81-26697
- POINT SOURCES**  
Electronic background suppression field scanning sensor for detecting point source targets  
[NASA-CASE-XGS-05211] c07 N69-39980  
X ray collimating structure for focusing radiation directly onto detector  
[NASA-CASE-XHQ-04106] c14 N70-40240  
Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c32 N81-27341
- POINTING CONTROL SYSTEMS**  
Development of reflector system for application to line-of-sight pointing and tracking telescopes  
[NASA-CASE-NPO-10468] c23 N71-33229  
All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c35 N77-20399  
Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c37 N78-27424  
Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c35 N79-26372  
Solar tracking system  
[NASA-CASE-MPS-23999-1] c44 N81-24520
- POLAR ORBITS**  
Spin phase synchronization of cartwheel satellite in polar orbit  
[NASA-CASE-XGS-05579] c31 N71-15676
- POLARIMETERS**  
Automatic polarimeter capable of measuring transient birefringence changes in electro-optic materials  
[NASA-CASE-XNF-08883] c23 N71-16101  
Two beam interferometer-polarimeter  
[NASA-CASE-NFO-11239] c14 N73-12446
- POLARITY**  
Converting output of positive dc voltage source to negative dc voltage across load with common reference point  
[NASA-CASE-XMF-08217] c03 N71-23239  
Peak polarity selector for monitoring waveforms  
[NASA-CASE-FRC-10010] c10 N71-24862  
Precision full wave rectifier circuit for rectifying incoming electrical signals having

- positive or negative polarity with only  
positive output signals  
[NASA-CASE-ABC-10101-1] c09 N71-33109
- POLARIZATION (WAVES)**  
System for interference signal nulling by  
polarization adjustment  
[NASA-CASE-NPO-12140-1] c32 N75-24982  
Multiprism collimator  
[NASA-CASE-GSC-12608-1] c35 N81-12387  
Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c32 N81-25278  
Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c35 N82-15381
- POLARIZED ELECTROMAGNETIC RADIATION**  
Device for improving efficiency of parabolic  
horn antenna system for linearly polarized  
signals  
[NASA-CASE-XNP-00611] c09 N70-35219  
Device for improving efficiency of parabolic  
reflector horn for linearly or circularly  
polarized waves  
[NASA-CASE-XNP-00540] c09 N70-35382  
Antenna feed system for receiving circular  
polarization and transmitting linear  
polarization  
[NASA-CASE-NPO-14362-1] c32 N80-16261  
Coaxial phased array antenna  
[NASA-CASE-MS-C-16800-1] c32 N81-14187
- POLARIZED LIGHT**  
Polarization compensator for optical  
communications  
[NASA-CASE-GSC-11782-1] c74 N76-30053  
Visible and infrared polarization ratio  
spectroreflectometer  
[NASA-CASE-LAR-12285-1] c35 N80-28687
- POLARIZED RADIATION**  
Microwave limb sounder --- measuring trace gases  
in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c46 N82-12685
- POLARIZERS**  
Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c74 N79-14891
- POLISHING**  
Conforming polisher for aspheric surfaces of  
revolution with inflatable tube  
[NASA-CASE-XGS-02884] c15 N71-22705  
Method of forming a sharp edge on an optical  
device  
[NASA-CASE-GSC-12348-1] c74 N80-24149
- POLLUTION CONTROL**  
System for minimizing internal combustion engine  
pollution emission  
[NASA-CASE-NPO-13402-1] c37 N76-18457  
Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c37 N77-31497  
Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c25 N81-19245  
Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c67 N81-29129
- POLLUTION MONITORING**  
Fluorescence detector for monitoring atmospheric  
pollutants  
[NASA-CASE-NPO-13231-1] c45 N75-27585  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c45 N76-17656  
Indicator providing continuous indication of the  
presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c45 N76-21742  
Method for detecting pollutants --- through  
chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c45 N76-31714  
Automated syringe sampler --- remote sampling of  
air and water  
[NASA-CASE-LAR-12308-1] c35 N81-29407
- POLYAMIDE RESINS**  
Vitra-violet process for producing flame  
resistant polyamides and products produced  
thereby --- protective clothing for high  
oxygen environments  
[NASA-CASE-MS-C-16074-1] c27 N80-26446  
Thermoset-thermoplastic aromatic polyamides  
[NASA-CASE-LAR-12723-1] c27 N81-15107
- POLYBENZIMIDAZOLE**  
Polymeric foams from cross-linkable  
poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232
- POLYBUTADIENE**  
Synthesis of polyfluorobutadiene by  
polymerization of perfluorobutadiene with  
diisopropyl peroxydicarbonate  
[NASA-CASE-NPO-10863] c06 N70-11251  
Low pressure perfluorobutadiene polymerization  
with peroxide catalysts  
[NASA-CASE-NPO-10447] c06 N70-11252  
Inhibited solid propellant composition  
containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c28 N79-14228
- POLYCARBONATES**  
Transparent polycarbonate resin, shell helmet  
and latch design for high altitude and space  
flight  
[NASA-CASE-XMS-04935] c05 N71-11190
- POLYCRYSTALS**  
Fabrication of polycrystalline solar cells on  
low-cost substrates  
[NASA-CASE-GSC-12022-1] c44 N76-28635  
Process for utilizing low-cost graphite  
substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c44 N78-24609  
Method for the preparation of inorganic single  
crystal and polycrystalline electronic materials  
[NASA-CASE-XLF-02545-1] c76 N79-21910
- POLYESTERS**  
Carboxyl terminated polyester prepolymers and  
foams produced from prepolymers and materials  
[NASA-CASE-NPO-10596] c06 N71-25929  
Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c31 N74-32917
- POLYETHER RESINS**  
Preparation of stable polyurethane polymer by  
reacting polymer with diisocyanate  
[NASA-CASE-MFS-10506] c06 N73-30100  
Preparation of fluorohydroxy ethers by reacting  
fluoroalkylene oxides with alkali salt of  
polyfluoroalkylene diol  
[NASA-CASE-MFS-10507] c06 N73-30101  
Preparation of fluorinated polyethers from  
2-hydro-perhaloisopropyl alcohols  
[NASA-CASE-MFS-11492] c06 N73-30102
- POLYIMIDE RESINS**  
Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c27 N75-29263  
Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c27 N78-17205  
Low density bismaleimide-carbon microballoon  
composites --- aircraft and submarine  
compartment safety  
[NASA-CASE-ARC-11040-2] c24 N78-27184  
Mixed diamines for lower melting addition  
polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c27 N79-33316  
Process for preparing high temperature polyimide  
film laminates  
[NASA-CASE-LAR-12742-1] c24 N81-12174  
Composition and method for making polyimide  
resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c27 N81-19296  
Tackifier for addition polyimides containing  
monoethylphthalate  
[NASA-CASE-LAR-12642-1] c27 N81-29229
- POLYIMIDES**  
Stable polyimide synthesis from mixtures of  
monomeric diamines and polycarboxylic acid  
esters  
[NASA-CASE-LEW-11325-1] c06 N73-27980  
Polyimide foam for the thermal insulation and  
fire protection  
[NASA-CASE-ARC-10464-1] c27 N74-12812  
Reinforced structural plastics  
[NASA-CASE-LEW-10199-1] c27 N74-23125  
Polyimides of ether-linked aryl tetracarboxylic  
dianhydrides  
[NASA-CASE-MFS-22355-1] c23 N76-15268  
Process for preparing thermoplastic aromatic  
polyimides  
[NASA-CASE-LAR-11828-1] c27 N78-32261  
Ambient cure polyimide foams --- thermal  
resistant foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215  
Catalysts for polyimide foams from aromatic  
isocyanates and aromatic dianhydrides ---  
flame retardant foams  
[NASA-CASE-ARC-11107-1] c25 N80-16116  
Crystalline polyimides --- reinforcing fibers  
for high temperature composites and adhesives  
as well as flame retardation  
[NASA-CASE-LAR-12099-1] c27 N80-16158

- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c33 N80-24549
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-1] c27 N80-26447
- Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c27 N81-14078
- Asymmetric polyimide separation membrane and method  
[NASA-CASE-NPO-15431-1] c25 N81-29178
- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c27 N82-11206
- POLYISOBUTYLENE**
- Chemical process for production of polyisobutylene compounds and application as solid rocket propellant binder  
[NASA-CASE-NPO-10893] c27 N73-22710
- POLYMER CHEMISTRY**
- New trifunctional alcohol derived from trimer acid and novel method of preparation  
[NASA-CASE-NPO-10714] c06 N69-31244
- Synthesis of siloxane containing epoxy polymers with low dielectric properties  
[NASA-CASE-MFS-13994-1] c06 N71-11240
- Apparatus for determining volatile condensable material present in polymeric products  
[NASA-CASE-XNP-09699] c06 N71-24607
- Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c27 N75-29263
- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c27 N78-15276
- Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c27 N78-17205
- Infusible silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMF-02526-1] c27 N79-21190
- Fluorine-containing polyformals  
[NASA-CASE-XMF-06900-1] c27 N79-21191
- In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c44 N79-25481
- Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c27 N81-24256
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c27 N81-24257
- Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c27 N81-24258
- Process for the preparation of polycarbonylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c27 N81-27271
- Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c27 N81-27272
- POLYMER MATRIX COMPOSITES**
- Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c24 N78-27180
- POLYMERIC FILMS**
- Ethylene oxide sterilization and encapsulating process for sterile preservation of instruments and solid propellants  
[NASA-CASE-XNP-09763] c14 N71-20461
- Hydraulic apparatus for casting and molding of liquid polymers  
[NASA-CASE-XNP-07659] c06 N71-22575
- Thermoelectric radiometer using polymer film as capacitor  
[NASA-CASE-ARC-10138-1] c14 N72-24477
- Development and characteristics of system for skin packaging articles using thermoplastic film heating and vacuum operated equipment  
[NASA-CASE-MFS-20855] c15 N73-27405
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c44 N76-14600
- Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c27 N79-14214
- Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c27 N80-23452
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c33 N80-24549
- Surface finishing  
[NASA-CASE-MSC-12631-3] c27 N81-14077
- Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c31 N81-16327
- Advanced inorganic separators for alkaline batteries and method of making same --- a polymeric coating applied to a porous flexible substrate  
[NASA-CASE-LEW-13171-1] c44 N81-22466
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c23 N81-29160
- POLYMERIZATION**
- Synthesis of polyfluorobutadiene by polymerization of perfluorobutadiene with diisopropyl peroxydicarbonate  
[NASA-CASE-NPO-10863] c06 N70-11251
- Low pressure perfluorobutadiene polymerization with peroxide catalysts  
[NASA-CASE-NPO-10447] c06 N70-11252
- Process for interfacial polymerization of pyromellitic dianhydride and tetraamino benzene  
[NASA-CASE-XLA-03104] c06 N71-11235
- Synthesis and chemical properties of imidazopyrrolone/imide copolymers  
[NASA-CASE-XLA-08802] c06 N71-11238
- Direct synthesis of polymeric schiff bases from two amines and two aldehydes  
[NASA-CASE-XMF-08655] c06 N71-11239
- Synthesis of azine polymers for heat shields by azine-aromatic aldehyde reaction  
[NASA-CASE-XMF-08656] c06 N71-11242
- Synthesis of schiff bases for heat shields by acetal amine reactions  
[NASA-CASE-XMF-08652] c06 N71-11243
- Preparation of elastomeric diamine silazane polymers  
[NASA-CASE-XMF-04133] c06 N71-20717
- Reaction of polyperfluoropolyenes with fluorine to produce saturated polymer chain or create reactive sites on chain  
[NASA-CASE-NPO-10862] c06 N72-22107
- Silphenylenesiloxane polymer with in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c06 N72-25151
- Polymerization of perfluorobutadiene  
[NASA-CASE-NPO-10863-2] c06 N72-25152
- Preparation of fluorohydroxy ethers by reacting fluoroalkylene oxides with alkali salt of polyfluoroalkylene diol  
[NASA-CASE-MFS-10507] c06 N73-30101
- Preparation of fluorinated polyethers from 2-hydro-perhaloisopropyl alcohols  
[NASA-CASE-MFS-11492] c06 N73-30102
- Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c25 N75-12087
- Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c27 N76-16228
- Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c27 N78-17214
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215
- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c27 N79-22300
- Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c27 N79-28307
- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c27 N79-33316
- Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c27 N80-10358
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c27 N80-24438

- Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups.  
[NASA-CASE-ARC-11241-1] c25 N81-14016
- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c27 N81-15104
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c27 N81-17259
- The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c27 N81-17262
- Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c25 N81-19242
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c25 N81-19244
- POLYMERS**
- Preparation of ordered poly(arylenesiloxane)/polymers  
[NASA-CASE-XMF-10753] c06 N71-11237
- Synthesis of aromatic diamines and dialdehyde polymers using Schiff base  
[NASA-CASE-XMF-03074] c06 N71-24740
- Automated ball rebound resilience test equipment for determining viscoelastic properties of polymers  
[NASA-CASE-XLA-08254] c14 N71-26161
- Infusible polymer production from reaction of polyfunctional epoxy resins with polyfunctional aziridine compounds  
[NASA-CASE-NPO-10701] c06 N71-28620
- Development of solid state polymer coating for obtaining thermal balance in spacecraft components  
[NASA-CASE-XLA-01745] c33 N71-28903
- Mercaptan terminated polymer containing sulfonic acid salts of nitrosubstituted aromatic amines for heat and moisture resistant coatings  
[NASA-CASE-ARC-10325] c06 N72-25147
- Solid propellant containing hydrazinium nitroformate oxidizer and polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c27 N73-16764
- Chemical process for production of polyisobutylene compounds and application as solid rocket propellant binder  
[NASA-CASE-NPO-10893] c27 N73-22710
- Utilization of lithium p-lithiphenoxide to prepare star polymers  
[NASA-CASE-NPO-10998-1] c06 N73-32029
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315
- Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c27 N77-31308
- Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c51 N80-16715
- Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c25 N80-23383
- Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c27 N80-24437
- Preparation of perfluorinated imidoylamidoximes --- for eventual preparation of heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-1] c23 N80-26386
- Preparation of perfluorinated 1,2,4-oxadiazoles --- heat and chemical resistant polymers  
[NASA-CASE-ARC-11267-2] c25 N80-26407
- POLYMETHYL METHACRYLATE**
- Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c27 N78-14164
- Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c74 N78-32854
- POLYSACCHARIDES**
- Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c27 N77-30236
- POLYTETRAFLUOROETHYLENE**
- Procedure for bonding polytetrafluoroethylene thermal protective sleeves to magnesium alloy conical shell components with different thermal coefficients  
[NASA-CASE-XLA-01262] c15 N71-21404
- POLYURETHANE FOAM**
- Self-erectable space structures of flexible foam for application in planetary orbits  
[NASA-CASE-XLA-00686] c31 N70-34135
- Modification of polyurethanes with alkyl halide resins, inorganic salts, and encapsulated volatile and reactive halogen for fuel fire control  
[NASA-CASE-ARC-10098-1] c06 N71-24739
- Lightweight fire resistant plastic foam for thermal protection of reentry vehicles and aircraft structures  
[NASA-CASE-ARC-10180-1] c28 N72-20767
- Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c27 N74-12814
- Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c27 N76-15310
- Mixing insert for foam dispensing apparatus  
[NASA-CASE-MFS-20607-1] c37 N76-19436
- POLYURETHANE RESINS**
- Chemical synthesis of hydroxy terminated perfluoro ethers as intermediates for highly fluorinated polyurethane resins  
[NASA-CASE-NPO-10768] c06 N71-27254
- Formation of polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c06 N72-27144
- Fluorinated polyurethanes produced by reacting hydroxy terminated perfluoro polyether with diisocyanate  
[NASA-CASE-NPO-10767-2] c06 N72-27151
- Chemical and physical properties of synthetic polyurethane polymer prepared by reacting hydroxy carbonate with organic diisocyanate  
[NASA-CASE-MFS-10512] c06 N73-30099
- Preparation of stable polyurethane polymer by reacting polymer with diisocyanate  
[NASA-CASE-MFS-10506] c06 N73-30100
- Preparation of polyurethane polymer by reacting hydroxy polyformal with organic diisocyanate  
[NASA-CASE-MFS-10509] c06 N73-30103
- Chemical and elastic properties of fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c06 N73-33076
- Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c27 N78-17213
- POLYVINYL ALCOHOL**
- In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c44 N79-25481
- Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c27 N80-32516
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c27 N81-24257
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13504-1] c27 N81-27279
- Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c44 N81-27615
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c23 N81-29160
- Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c44 N81-29531
- PORCELAIN**
- Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c27 N75-27160
- POROSITY**
- Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c37 N75-26371
- POROUS MATERIALS**
- Production of refractory bodies with controlled porosity by pressing and heating mixtures of refractory and inert metal powders



[NASA-CASE-LEW-10393-1] c17 N71-15468  
Multilayer porous refractory metal ionizer design with thick, porous, large-grain substrates and thin, porous micron-grain substrates  
[NASA-CASE-XNP-04338] c17 N71-23046  
Lubrication for bearings by capillary action from oil reservoir of porous material  
[NASA-CASE-XNP-03972] c15 N71-23048  
Method and photodetector device for locating abnormal voids in low density materials  
[NASA-CASE-MFS-20044] c14 N71-28993  
Production method for manufacturing porous tungsten bodies from tungsten powder particles  
[NASA-CASE-XNP-04339] c17 N71-29137  
Compressible electrolyte saturated sponge electrode for biomedical applications  
[NASA-CASE-MSC-13648] c05 N72-27103  
Porous electrode for use in electrochemical cells  
[NASA-CASE-GSC-11368-1] c09 N73-32108  
Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c44 N74-19692  
Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c37 N78-25426  
Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c34 N79-13289  
Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-16737-1] c25 N81-29180  
Method of repairing surface damage to porous refractory substrates --- shuttle orbiter tiles  
[NASA-CASE-MSC-16736-1] c27 N81-29231  
Castable high temperature refractory materials  
[NASA-CASE-LEW-13080-2] c27 N82-11210

**POROUS PLATES**  
Method for producing porous tungsten plates for ionizing cesium compounds for propulsion of ion engines  
[NASA-CASE-XLE-00455] c28 N70-38197

**PORPHYRINS**  
Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c51 N80-16714

**PORTABLE EQUIPMENT**  
Portable electron beam welding chamber  
[NASA-CASE-LEW-11531] c15 N71-14932  
Portable apparatus producing high velocity annular air column surrounding low velocity, filtered, superclean air central core for industrial clean room environmental control  
[NASA-CASE-XMF-03212] c15 N71-22721  
Portable cutting machine for piping weld preparation  
[NASA-CASE-XKS-07953] c15 N71-26134  
Method and apparatus for precision sizing and joining of large diameter tubes by bulging or constricting overlapping ends  
[NASA-CASE-XMF-05114-2] c15 N71-26148  
Portable cryogenic cooling system design including turbine pump, cooling chamber, and atomizer  
[NASA-CASE-NPO-10467] c23 N71-26654  
Automatic controlled drive mechanism for portable boring bar  
[NASA-CASE-XLA-03661] c15 N71-33518  
One hand backpack harness  
[NASA-CASE-LAR-10102-1] c05 N72-23085  
Portable tester for monitoring bacterial contamination by adenosine triphosphate light reaction  
[NASA-CASE-GSC-10879-1] c14 N72-25413  
Portable penetrometer for analyzing soil characteristics  
[NASA-CASE-MFS-20774] c14 N73-19420  
Hand-held, lightweight, portable photomicroscope  
[NASA-CASE-ARC-10468-1] c14 N73-33361  
System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c37 N75-33395  
Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c37 N76-18454  
Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c25 N79-10163  
Portable heatable container  
[NASA-CASE-NPO-14237-1] c44 N80-20808

Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c33 N80-26599  
Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c33 N81-25299  
Dual-beam skin friction interferometer --- portable equipment  
[NASA-CASE-ARC-11354-1] c36 N81-29415

**PORTABLE LIFE SUPPORT SYSTEMS**  
Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MSC-16182-1] c54 N80-10799

**PORTS (OPENINGS)**  
Sealing evacuation port and evacuating vacuum container such as space jackets  
[NASA-CASE-XMF-03290] c15 N71-23256  
Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c31 N81-19343

**POSITION (LOCATION)**  
Position locating system for remote aircraft using voice communication and digital signals  
[NASA-CASE-GSC-10087-2] c21 N71-13958  
Development of telemetry system for position location and data acquisition  
[NASA-CASE-GSC-10083-1] c30 N71-16090  
Automatic braking device for rapidly transferring humans or materials from elevated location  
[NASA-CASE-XKS-07814] c15 N71-27067  
System and method for position locating for air traffic control involving supersonic transports  
[NASA-CASE-GSC-10087-3] c07 N72-12080  
Location identification system with ground based transmitter and aircraft borne receiver/decoder  
[NASA-CASE-ERC-10324] c07 N72-25173  
System for detecting impact position of cosmic dust on detector surface  
[NASA-CASE-GSC-11291-1] c25 N72-33696  
Collimator for analyzing spatial location of near and distant sources of radiation  
[NASA-CASE-MFS-20546-2] c14 N73-30389  
Measuring probe position recorder  
[NASA-CASE-LAB-10806-1] c35 N74-32877  
Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NFO-13217-1] c32 N75-26194  
Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c35 N75-27331  
Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c03 N76-32140  
Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c33 N77-31404  
X-ray position detector  
[NASA-CASE-NPO-12087-1] c74 N81-19898  
Navigation system and method  
[NASA-CASE-GSC-12508-1] c04 N81-26085

**POSITION INDICATORS**  
Rocket-borne aspect sensor consisting of radiation sensor, apertured disk, commutator, and counting circuits  
[NASA-CASE-XGS-08266] c14 N69-27432  
Characteristics and performance of electrical system to determine angular rotation  
[NASA-CASE-XMF-00447] c14 N70-33179  
Magnetic element position sensing device, using misaligned electromagnets  
[NASA-CASE-XGS-07514] c23 N71-16099  
Describing angular position and velocity sensing apparatus  
[NASA-CASE-XGS-05680] c14 N71-17585  
Mosaic semiconductor radiation detector and position indicator systems engineering for low energy particles  
[NASA-CASE-XGS-03230] c14 N71-23401  
Doppler compensated communication system for locating supersonic transport position  
[NASA-CASE-GSC-10087-4] c07 N73-20174  
Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c35 N75-33367  
Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c17 N76-21250

- Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c44 N80-18552
- POSITIONING**
- Centering device with ultrafine adjustment for use with roundness measuring apparatus  
[NASA-CASE-XMF-00480] c14 N70-39898
- Portable device for aligning surfaces of two adjacent wall or sheet sections for joining at point of junction  
[NASA-CASE-XMF-01452] c15 N70-41371
- Electro-optical/computer system for aligning large structural members and maintaining correct position  
[NASA-CASE-XNP-02029] c14 N70-41955
- Manual control mechanism for adjusting control rod to null position  
[NASA-CASE-XLA-01808] c15 N71-20740
- Rotating raster generator  
[NASA-CASE-FRC-10071-1] c32 N74-20813
- POSITIONING DEVICES (MACHINERY)**
- Swivel support for gas bearing for position adjustment between ball and supporting cup  
[NASA-CASE-XMF-07808] c15 N71-23812
- Caterpillar micropositioner for positioning machine tools adjacent to workpiece  
[NASA-CASE-GSC-10780-1] c14 N72-16283
- Positioning mechanism for converting translatory motion into rotary motion  
[NASA-CASE-NPO-10679] c15 N72-21462
- Design and development of test stand system for supporting test items in vacuum chamber  
[NASA-CASE-MFS-21362] c11 N73-20267
- Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c74 N74-21304
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014
- Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c54 N75-27760
- Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c37 N77-27400
- POSITIVE FEEDBACK**
- Complementary regenerative transistorized switch circuit employing positive and negative feedback  
[NASA-CASE-XGS-02751] c09 N71-23015
- POTABLE WATER**
- Potable water reclamation from human wastes in zero-G environment  
[NASA-CASE-XLA-03213] c05 N71-11207
- Utilization of solar radiation by solar still for converting salt and brackish water into potable water  
[NASA-CASE-XMS-04533] c15 N71-23086
- Chlorine generator for purifying water in life support systems of manned spacecraft  
[NASA-CASE-XLA-08913] c14 N71-28933
- Potable water dispenser  
[NASA-CASE-MFS-21115-1] c54 N74-12779
- Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c54 N74-17853
- Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c54 N78-14784
- POTASSIUM SILICATES**
- Fireproof potassium silicate coating composition, insoluble in water after application  
[NASA-CASE-GSC-10072] c18 N71-14014
- POTENTIOMETERS**
- Angle detector  
[NASA-CASE-ARC-11036-1] c35 N78-32395
- POTENTIOMETERS (INSTRUMENTS)**
- Two axis flight controller with potentiometer control shafts directly coupled to rotatable ball members  
[NASA-CASE-XFR-04104] c03 N70-42073
- Device for controlling rotary potentiometer mounted on aircraft steering wheel or aileron control  
[NASA-CASE-XAC-10019] c15 N71-23809
- Mechanical function generators with potentiometer as sensing element  
[NASA-CASE-XAC-00001] c15 N71-28952
- Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c51 N81-28698
- POTTING COMPOUNDS**
- Removable potting compound for instrument shock protection  
[NASA-CASE-XLA-00482] c15 N70-36409
- Flexible, repairable, portable composition for encapsulating electric connectors  
[NASA-CASE-XGS-05180] c18 N71-25881
- Thermally conductive polymer for potting electrical components  
[NASA-CASE-GSC-11304-1] c06 N72-21105
- POWDER METALLURGY**
- Freeze casting of metal ceramic and refractory compound powders into plastic slips  
[NASA-CASE-XLE-00106] c15 N71-16076
- Production method for manufacturing porous tungsten bodies from tungsten powder particles  
[NASA-CASE-XNP-04339] c17 N71-29137
- Dry electrode manufacture, using silver powder with cement  
[NASA-CASE-FRC-10029-2] c05 N72-25121
- Grinding mixtures of powdered metals and inert fillers for conversion to halide  
[NASA-CASE-LEW-10450-1] c15 N72-25448
- Superalloys from prealloyed powders at high temperatures  
[NASA-CASE-LEW-10805-1] c15 N73-13465
- Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c26 N74-10521
- Method of forming articles of manufacture from superalloy powders  
[NASA-CASE-LEW-10805-2] c37 N74-13179
- Cermet composition and method of fabrication --- heat resistant alloys and powders  
[NASA-CASE-NFC-13120-1] c27 N76-15311
- POWDERED ALUMINUM**
- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c27 N82-11206
- POWER AMPLIFIERS**
- Characteristics of high power, low distortion, alternating current power amplifier  
[NASA-CASE-LAR-10218-1] c09 N70-34559
- Power supply with automatic power factor conversion system  
[NASA-CASE-XMS-02159] c10 N71-22961
- Solid state broadband stable power amplifier  
[NASA-CASE-XNP-10854] c10 N71-26331
- High efficiency transformerless amplitude modulator coupled to RF power amplifier  
[NASA-CASE-GSC-10668-1] c07 N71-28430
- Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-MFS-21616-1] c33 N75-30429
- POWER CONDITIONING**
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c33 N79-24254
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c44 N80-14472
- Unequal split microwave power divider  
[NASA-CASE-LAR-12889-1] c33 N81-31483
- POWER CONVERTERS**
- A gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c37 N81-24445
- POWER EFFICIENCY**
- Low power drain transistor feedback circuit  
[NASA-CASE-XGS-04999] c09 N69-24317
- Excitation and detection circuitry for flux responsive magnetic head  
[NASA-CASE-XNP-04183] c09 N69-24329
- Increasing available power per unit area in ion rocket engine by increasing beam density  
[NASA-CASE-XLE-00519] c28 N70-41576
- Absorbing gas reactivity control system for minimizing power distribution and perturbation in nuclear reactors  
[NASA-CASE-XLE-04599] c22 N72-20597
- Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c15 N75-13007
- A gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c37 N81-24445
- A simplified power factor controller with increased energy saving circuit  
[NASA-CASE-MFS-25323-1] c33 N82-12349
- POWER GAIN**
- Serrodyne traveling wave tube reentrant amplifier for synchronous communication satellites operating at microwave frequencies  
[NASA-CASE-XGS-01022] c07 N71-16088
- Switching circuit for control of cathode ray tube beam with fast rise time for output signal

- [NASA-CASE-KSC-10647-1] c10 N72-31273  
Multiple-beam, high-power, precision pointing antenna system  
[NASA-CASE-NPO-15406-1] c33 N82-12345
- POWER LIMITERS**  
Monostable multivibrator for conserving power in spacecraft systems  
[NASA-CASE-GSC-10082-1] c10 N72-20221
- POWER LINES**  
Patent data on terminal insert connector for flat electric cables  
[NASA-CASE-XMF-00324] c09 N70-34596  
Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c33 N75-19524  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193  
Shielded conductor cable system  
[NASA-CASE-HSC-12745-1] c33 N81-27397
- POWER SERIES**  
Describing circuit for obtaining sum of squares of numbers  
[NASA-CASE-XGS-04765] c08 N71-18693  
Phase modulating with odd and even finite power series of a modulating signal  
[NASA-CASE-LAR-11607-1] c32 N77-14292
- POWER SPECTRA**  
Method and apparatus for high resolution power spectrum analysis  
[NASA-CASE-NPO-10748] c08 N72-20177  
An instrument for determining coincidence and elapse time between independent sources of random sequential events  
[NASA-CASE-LAR-12531-1] c35 N81-31529
- POWER SUPPLIES**  
Tape recorder designed for low power consumption and resistance to operational failure under high stress conditions  
[NASA-CASE-XGS-08259] c14 N71-23698  
Current dependent variable inductance for input filter chokes of ac or dc power supplies  
[NASA-CASE-ERC-10139] c09 N72-17154  
Performance of ac power supply developed for CO2 laser system  
[NASA-CASE-GSC-11222-1] c16 N73-32391  
High voltage distributor  
[NASA-CASE-GSC-11849-1] c33 N76-16332
- POWER SUPPLY CIRCUITS**  
Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c03 N69-21330  
Power control switching circuit using low voltage semiconductor controlled rectifiers for high voltage isolation  
[NASA-CASE-XNP-02713] c10 N69-35888  
Increasing power conversion efficiency of electronic amplifiers by power supply switching  
[NASA-CASE-XMS-00945] c09 N71-10798  
Electric power system utilizing thermionic plasma diodes in parallel and heat pipes as cathodes  
[NASA-CASE-XMF-05843] c03 N71-11055  
Pulsed energy power system for application of combustible gases to turbine controlling ac voltage generator  
[NASA-CASE-MSC-13112] c03 N71-11057  
Data processor having multiple sections activated at different times by selective power coupling to sections  
[NASA-CASE-XGS-04767] c08 N71-12494  
Microwave power receiving antenna solving heat dissipation problems by construction of elements as heat pipe devices  
[NASA-CASE-MFS-20333] c09 N71-13486  
Design, development, and operating principles of power supply with starting circuit which is independent of voltage regulator  
[NASA-CASE-XMS-01991] c09 N71-21449  
Power supply with automatic power factor conversion system  
[NASA-CASE-XMS-02159] c10 N71-22961  
Electric circuit for reversing direction of current flow  
[NASA-CASE-XNP-00952] c10 N71-23271  
Power supply with overload protection for series stage transistor  
[NASA-CASE-XMS-00913] c10 N71-23543  
Automatic power supply circuit design for driving inductive loads and minimizing power consumption including solenoid example  
[NASA-CASE-NPO-10716] c09 N71-24892  
Unsaturating magnetic core transformer design with warning signal for electrical power processing equipment  
[NASA-CASE-ERC-10125] c09 N71-24893  
Device for monitoring voltage by generating signal when voltages drop below predetermined value  
[NASA-CASE-KSC-10020] c10 N71-27338  
Power point tracker for maintaining optimal output voltage of power source  
[NASA-CASE-GSC-10376-1] c14 N71-27407  
Microwave power divider for providing variable output power to output waveguide in fixed waveguide system  
[NASA-CASE-NPO-11031] c07 N71-33606  
Circuit for monitoring power supply by ripple current indication  
[NASA-CASE-KSC-10162] c09 N72-11225  
Dc to ac to dc converter with transistor driven synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c09 N72-25253  
LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers  
[NASA-CASE-MFS-21698-1] c33 N74-26732  
Integrable power gyrator --- with 2-matrix design using parallel transistors  
[NASA-CASE-MFS-22342-1] c33 N75-30428  
The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NFC-13512-1] c33 N77-10428  
Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c73 N78-28913  
Closed loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179  
Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c33 N81-12330  
Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c33 N81-27395
- PRECESSION**  
Dynamic precession damping of spin-stabilized vehicles by using rate gyroscope and angular accelerometer  
[NASA-CASE-XLA-01989] c21 N70-34295
- PRECIPITATION (CHEMISTRY)**  
Production of pure metals  
[NASA-CASE-LEW-10906-1] c25 N74-30502
- PRECISION**  
Precision stepping drive device using cam disk  
[NASA-CASE-MFS-14772] c15 N71-17692  
Method and apparatus for precision sizing and joining of large diameter tubes by bulging or constricting overlapping ends  
[NASA-CASE-XMF-05114-2] c15 N71-26148  
Method and apparatus for precision control of radiometer  
[NASA-CASE-NFO-15398-1] c35 N81-33449
- PREFLIGHT OPERATIONS**  
Automatic balancing device for use on frictionless supported attitude-controlled test platforms  
[NASA-CASE-LAR-10774] c10 N71-13545
- PRELAUNCH TESTS**  
Low loss parasitic probe antenna for prelaunch tests of spacecraft antennas  
[NASA-CASE-XKS-09348] c09 N71-13521  
Digital computer system for automatic prelaunch checkout of spacecraft  
[NASA-CASE-XKS-08012-2] c31 N71-15566
- PREPOLYMERS**  
Carboxyl terminated polyester prepolymers and foams produced from prepolymers and materials  
[NASA-CASE-NPC-10596] c06 N71-25929  
Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-1] c27 N80-26447  
Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NFO-13137-1] c27 N80-32514  
Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c27 N80-32515  
Structural wood panels with improved fire resistance  
[NASA-CASE-ABC-11174-1] c24 N81-13999

## PREPREGS

Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c27 N81-29229

## PRESSURE

Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c35 N76-14430

## PRESSURE CHAMBERS

Triggering system for electric arc driven impulse wind tunnel  
[NASA-CASE-XMF-00411] c11 N70-36913

Whole body measurement systems --- for weightlessness simulation  
[NASA-CASE-MSC-13972-1] c52 N74-10975

Accumulator  
[NASA-CASE-MFS-19287-1] c34 N77-30399

Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c31 N81-19343

## PRESSURE DISTRIBUTION

Piston device for producing known constant positive pressure within lungs by using thoracic muscles  
[NASA-CASE-XMS-01615] c05 N70-41329

Preventing pressure buildup in electrochemical cells by reacting palladium oxide with evolved hydrogen  
[NASA-CASE-XGS-01419] c03 N70-41864

Accumulator  
[NASA-CASE-MFS-19287-1] c34 N77-30399

Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c37 N81-15363

## PRESSURE DROP

Leak detector  
[NASA-CASE-MFS-21761-1] c35 N75-15931

## PRESSURE EFFECTS

System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c33 N74-17927

Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c31 N75-13111

Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c37 N75-15686

Fluid pressure balanced seal  
[NASA-CASE-XGS-01286-1] c37 N79-33469

## PRESSURE GAGES

Differential pressure cell insensitive to changes in ambient temperature and extreme overload  
[NASA-CASE-XAC-00042] c14 N70-34816

Blood pressure measuring system for separately recording dc and ac pressure signals of Korotkoff sounds  
[NASA-CASE-XMS-06061] c05 N71-23317

Control system for pressure balance device used in calibrating pressure gages  
[NASA-CASE-XMF-04134] c14 N71-23755

Improved McLeod gage for pressure measurement  
[NASA-CASE-XAC-04458] c14 N71-24232

Ultrahigh vacuum gauge with two collector electrodes  
[NASA-CASE-LAR-02743] c14 N73-32324

Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c36 N78-17366

## PRESSURE GRADIENTS

Positive displacement flowmeter for measuring extremely low flows of fluid with self calibrating features  
[NASA-CASE-XMF-02822] c14 N70-41994

Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c36 N81-19440

## PRESSURE HEADS

Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c37 N81-33482

## PRESSURE MEASUREMENT

Design and development of inertia diaphragm pressure transducer  
[NASA-CASE-XAC-02981] c14 N71-21072

Design and development of pressure sensor for measuring differential pressures of few pounds per square inch

[NASA-CASE-XMF-01974] c14 N71-22752

Improved McLeod gage for pressure measurement

[NASA-CASE-XAC-04458] c14 N71-24232

Coherent light beam device and method for

measuring gas density in vacuum chambers

[NASA-CASE-XER-11203] c14 N71-28994

Design, development, and characteristics of

pressure and temperature sensor operating

immersed in fluid flow

[NASA-CASE-LEW-10281-1] c14 N72-17327

Calibration of vacuum gauges for measuring total

and partial pressures in ultrahigh vacuum region

[NASA-CASE-XGS-07752] c14 N73-30390

Absolute pressure measuring device for measuring

gas density level in high vacuum range

[NASA-CASE-LAR-10000] c14 N73-30394

Wind tunnel model and method

[NASA-CASE-LAR-10812-1] c09 N74-17955

Indicated mean-effective pressure instrument

[NASA-CASE-LEW-12661-1] c35 N79-14345

High-temperature microphone system --- for

measuring pressure fluctuations in gases at

high temperature

[NASA-CASE-LAR-12375-1] c32 N79-24203

Static pressure orifice system testing method

and apparatus

[NASA-CASE-LAR-12269-1] c35 N80-18358

Detection of the transitional layer between

laminar and turbulent flow areas on a wing

surface --- using an accelerometer to measure

pressure levels during wind tunnel tests

[NASA-CASE-LAR-12261-1] c02 N80-20224

A self-correcting electronically scanned

pressure sensor

[NASA-CASE-LAR-12686-1] c09 N81-27121

Non-invasive method and apparatus for measuring

pressure within a pliable vessel

[NASA-CASE-ARC-11264-1] c52 N81-33804

## PRESSURE REDUCTION

Relief valve to permit slow and fast bleeding

rates at difference pressure levels

[NASA-CASE-XMS-05894-1] c15 N69-21924

Sealed electric storage battery with gas

manifold interconnecting each cell

[NASA-CASE-XNP-03378] c03 N71-11051

Depressurization of arc lamps

[NASA-CASE-NPO-10790-1] c33 N77-21316

Method of purifying metallurgical grade silicon

employing reduced pressure atmospheric control

[NASA-CASE-NPO-14474-1] c26 N80-14229

Pressure letdown method and device for coal

conversion systems

[NASA-CASE-NPO-15100-1] c28 N81-33306

## PRESSURE REGULATORS

Pressure regulating system with high pressure

fluid source, adapted to maintain constant

downstream pressure

[NASA-CASE-XNF-00450] c15 N70-38603

Pulmonary resuscitation method and apparatus

with adjustable pressure regulator

[NASA-CASE-XMS-01115] c05 N70-39922

Structural design of high pressure regulator valve

[NASA-CASE-XNP-00710] c15 N71-10778

Space suit with pressure-volume compensator system

[NASA-CASE-XLA-05332] c05 N71-11194

Portable environmental control and life support

system for astronaut in and out of spacecraft

[NASA-CASE-XMS-09632-1] c05 N71-11203

Antibacklash circuit for hydraulic drive system

[NASA-CASE-XNP-01020] c03 N71-12260

High impact pressure regulator having minimum

number of lightweight movable elements

[NASA-CASE-NFO-10175] c14 N71-18625

Pressure regulator for space suit worn

underwater to simulate space environment for

testing and experimentation

[NASA-CASE-MFS-20332] c05 N72-20097

Underwater space suit pressure control regulator

[NASA-CASE-MFS-20332-2] c05 N73-25125

Combined pressure regulator and shutoff valve

[NASA-CASE-NPO-13201-1] c37 N75-15050

Pressure modulating valve

[NASA-CASE-MSC-14905-1] c37 N77-28487

Flow compensating pressure regulator

[NASA-CASE-LEW-12718-1] c34 N78-25351

Flow diverter valve and flow diversion method

[NASA-CASE-HQN-00573-1] c37 N79-33468

Intra-ocular pressure normalization technique

and equipment

- [NASA-CASE-LEW-12955-1] c52 N80-14684  
Intra-ocular pressure normalization technique and equipment
- [NASA-CASE-LEW-12723-1] c52 N80-18690  
Pressure control valve --- inflating flexible bladders
- [NASA-CASE-ARC-11251-1] c37 N81-17433  
Prosthetic urinary sphincter
- [NASA-CASE-MFS-23717-1] c52 N81-25660  
Ion beam sputter-etched ventricular catheter for hydrocephalus shunt
- [NASA-CASE-LEW-13107-1] c52 N81-27786
- PRESSURE SENSORS**
- Fabrication of pressure-telemetry transducers  
[NASA-CASE-XNP-09752] c14 N69-21541
- Pressure probe for sensing ambient static air pressures  
[NASA-CASE-XLA-00481] c14 N70-36824
- Ambient atmospheric pressure sensing device for determining altitude of flight vehicles  
[NASA-CASE-XLA-00128] c15 N70-37925
- Dynamic sensor for gas pressure or density measurement  
[NASA-CASE-XAC-02877] c14 N70-41681
- Design and development of inertia diaphragm pressure transducer  
[NASA-CASE-XAC-02981] c14 N71-21072
- Design and development of pressure sensor for measuring differential pressures of few pounds per square inch  
[NASA-CASE-XMF-01974] c14 N71-22752
- Combination pressure transducer-calibrator assembly for measuring fluid  
[NASA-CASE-XNP-01660] c14 N71-23036
- Pressure sensor network for measuring liquid dynamic response in flight including fuel tank acceleration, liquid slosh amplitude, and fuel depth monitoring  
[NASA-CASE-XLA-05541] c12 N71-26387
- Miniature electromechanical junction transducer operating on piezoelectric effect and utilizing epoxy for stress coupling component  
[NASA-CASE-ERC-10087] c14 N71-27334
- Method for making pressurized meteoroid penetration detector panels  
[NASA-CASE-XLA-06916] c15 N71-29018
- Design, development, and characteristics of pressure and temperature sensor operating immersed in fluid flow  
[NASA-CASE-LEW-10281-1] c14 N72-17327
- Pressure transducer for systems for measuring forces of compression  
[NASA-CASE-NPO-10832] c14 N72-21405
- Pressure operated electrical switch responsive to pressure decrease after pressure increase  
[NASA-CASE-LAR-10137-1] c09 N72-22204
- Wide range dynamic pressure sensor with vibrating diaphragm for measuring density and pressure of gaseous environment  
[NASA-CASE-ARC-10263-1] c14 N72-22438
- Development of differential pressure control system using motion of mechanical diaphragms to operate electric switch  
[NASA-CASE-MFS-14216] c14 N73-13418
- Pressurized panel meteoroid detector  
[NASA-CASE-XLA-08916-2] c14 N73-28487
- System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c35 N74-13132
- Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c35 N74-32878
- Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c54 N75-13531
- Leak detector  
[NASA-CASE-MFS-21761-1] c35 N75-15931
- Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c35 N75-33368
- Static pressure probe  
[NASA-CASE-LAR-11552-1] c35 N76-14429
- Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c33 N76-21390
- Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c52 N76-29896
- Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c35 N77-14407
- Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c35 N78-17359
- Electronically scanned pressure sensor module with in situ calibration capability  
[NASA-CASE-LAR-12230-1] c35 N79-14347
- System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-PHC-11024-1] c02 N80-28300
- Tactile sensing system --- manipulator controllers  
[NASA-CASE-NPO-15094-1] c33 N81-16386
- A self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12686-1] c09 N81-27121
- Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c37 N81-29442
- Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-1] c52 N81-33804
- PRESSURE SUITS**
- Helmet and torso tiedown mechanism for shortening pressure suits upon inflation  
[NASA-CASE-XMS-00784] c05 N71-12335
- Design and development of flexible joint for pressure suits  
[NASA-CASE-XMS-09636] c05 N71-12344
- Cord restraint system for pressure suit joints  
[NASA-CASE-XMS-09635] c05 N71-24623
- Development of improved convolute section for pressurized suits to provide high degree of mobility in response to minimum of applied torque  
[NASA-CASE-XMS-09637-1] c05 N71-24730
- Fabrication of root cord restrained fabric suit sections from sheets of fabric  
[NASA-CASE-MSC-12398] c05 N72-20098
- Restraint torso for increased mobility and reduced physiological effects while wearing pressurized suits  
[NASA-CASE-MSC-12397-1] c05 N72-25119
- Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c54 N74-32546
- Walking boot assembly  
[NASA-CASE-ARC-11101-1] c54 N78-17675
- Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c54 N80-30043
- PRESSURE SWITCHES**
- Reinforcing beam system for highly flexible diaphragms in valves or pressure switches  
[NASA-CASE-XNP-01962] c32 N70-41370
- Calibrating pressure switch  
[NASA-CASE-XMF-04494-1] c33 N79-33392
- PRESSURE VESSELS**
- Liquid rocket systems for propulsion and control of spacecraft  
[NASA-CASE-XNP-00610] c28 N70-36910
- Thin walled pressure test vessel using low-melting alloy-filled joint to attach shell to heads  
[NASA-CASE-XLE-04677] c15 N71-10577
- Control of gas flow from pressurized vessel by thermal expansion of metal plug  
[NASA-CASE-NPO-10298] c12 N71-17661
- Method and apparatus for inducing compressive stresses in pressure vessel to prevent stress corrosion  
[NASA-CASE-XLA-07390] c15 N71-18616
- Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c35 N74-15093
- Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NIC-12142-1] c38 N76-28563
- Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c35 N78-10428
- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c37 N81-17433
- PRESSURE WELDING**
- Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c37 N74-21055
- PRESTRESSING**
- Restraint mechanism  
[NASA-CASE-MSC-13054] c54 N78-17677
- PRESTRESSING**
- Prestressed rocket nozzle with ceramic inner

- rings and refractory metal outer rings  
[NASA-CASE-XNP-02888] c18 N71-21068
- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c37 N81-24446
- Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c24 N81-29163
- PRETREATMENT**
- Anti-wettable materials brazing processes using titanium and zirconium for surface pretreatment  
[NASA-CASE-XMS-03537] c15 N69-21471
- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c37 N81-24446
- PRIMERS (COATINGS)**
- Advanced inorganic separators for alkaline batteries and method of making same --- a polymeric coating applied to a porous flexible substrate  
[NASA-CASE-LEW-13171-1] c44 N81-22466
- Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-13359-1] c27 N81-24265
- PRINTED CIRCUITS**
- Electrical feedthrough connection for printed circuit boards  
[NASA-CASE-XMF-01483] c14 N69-27431
- Electric connector for printed cable to printed cable or to printed board  
[NASA-CASE-XMF-00369] c09 N70-36494
- Electrical connection for printed circuits on common board, using bellows principle in rivet  
[NASA-CASE-XNP-05082] c15 N70-41960
- Electrical spot terminal assembly for printed circuit boards  
[NASA-CASE-NPO-10034] c15 N71-17685
- Solder coating process for printed copper circuit protection  
[NASA-CASE-XMF-01599] c09 N71-20705
- Handling tool for printed circuit cards  
[NASA-CASE-MFS-20453] c15 N71-29133
- Development and characteristics of polyimide impregnated laminates with fiberglass cloth backing for application as printed circuit boards  
[NASA-CASE-MFS-20408] c18 N73-12604
- Techniques for packaging and mounting printed circuit boards  
[NASA-CASE-MFS-21919-1] c10 N73-25243
- Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c33 N74-26977
- Connector --- for connecting circuits on different layers of multilayer printed circuit boards  
[NASA-CASE-LAR-11709-1] c37 N76-27567
- Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c37 N77-27400
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c44 N79-17314
- PRINTING**
- Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c44 N79-11468
- PRINTOUTS**
- Handling tool for printed circuit cards  
[NASA-CASE-MFS-20453] c15 N71-29133
- PRISMS**
- Interferometer prism and control system for precisely determining direction to remote light source  
[NASA-CASE-ARC-10278-1] c14 N73-25463
- Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c73 N78-32848
- Multiprism collimator  
[NASA-CASE-GSC-12608-1] c35 N81-12387
- Rhomboid prism pair for rotating the plane of parallel light beams --- laser velocimeters  
[NASA-CASE-ARC-11311-1] c74 N81-16882
- PROBABILITY THEORY**
- System and method for character recognition  
[NASA-CASE-NFO-11337-1] c74 N81-19896
- PROBES**
- Method and apparatus for connecting two spacecraft with probe of one inserted in rocket engine nozzle of other spacecraft  
[NASA-CASE-MFS-11133] c31 N71-16222
- Development of droplet monitoring probe for use in analysis of droplet propagation in mixed-phase fluid stream  
[NASA-CASE-NFO-10985] c14 N73-20478
- System for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c52 N81-26697
- PRODUCT DEVELOPMENT**
- Using molds for fabricating individual fluid circuit components  
[NASA-CASE-XLA-07829] c15 N72-16329
- Process for developing filament reinforced plastic tubes used in research and development programs  
[NASA-CASE-LAR-10203-1] c15 N72-16330
- Simplified technique and device for producing industrial grade synthetic diamonds  
[NASA-CASE-MFS-20698-2] c15 N73-19457
- High power laser apparatus and system  
[NASA-CASE-XLE-2529-2] c36 N75-27364
- Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c44 N80-29835
- Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c74 N81-12862
- Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c25 N81-19242
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c25 N81-19244
- Resin composition, process for producing the same, product produced therefrom and process for producing said product  
[NASA-CASE-ARC-11331-1] c27 N81-31363
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c27 N81-31364
- PRODUCTION ENGINEERING**
- Standard coupling design for mass production  
[NASA-CASE-XMS-02532] c15 N70-41808
- Fabrication of curved reflector segments for solar mirror  
[NASA-CASE-XLE-08917] c15 N71-15597
- Production of barium fluoride-calcium fluoride composite lubricant for bearings or seals  
[NASA-CASE-XLE-08511-2] c18 N71-16105
- Fabrication of sintered impurity semiconductor brushes for electrical energy transfer  
[NASA-CASE-XMF-01016] c26 N71-17818
- Technique for making foldable, inflatable, plastic honeycomb core panels for use in building and bridge structures, light and radio wave reflectors, and spacecraft  
[NASA-CASE-XLA-03492] c15 N71-22713
- Multilayer porous refractory metal ionizer design with thick, porous, large-grain substrates and thin, porous micron-grain substrates  
[NASA-CASE-XNP-04338] c17 N71-23046
- Permanently magnetized ion engine casing construction for use in spacecraft propulsion systems  
[NASA-CASE-XNP-06942] c28 N71-23293
- Dry electrode design with wire sandwiched between two flexible conductive discs for monitoring physiological responses  
[NASA-CASE-FRC-10029] c09 N71-24618
- Production method of star tracking reticles for transmitting in visible and near ultraviolet regions  
[NASA-CASE-GSC-11188-1] c14 N73-32320
- Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c37 N75-26371
- Solar cell collector and method for producing same  
[NASA-CASE-LEW-12552-2] c44 N79-11472
- Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c76 N79-14906
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c44 N79-17314
- Method of fabricating a photovoltaic module of a substantially transparent construction

- [NASA-CASE-NPO-14303-1] c44 N80-18550  
Apparatus for sequentially transporting containers  
[NASA-CASE-MFS-23846] c37 N80-29704  
Apparatus for use in the production of  
ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c33 N81-19389  
Method and apparatus for producing concentric  
hollow spheres --- inertial confinement fusion  
targets  
[NASA-CASE-NPO-14596-1] c31 N81-33319
- PROJECTILES**  
Self-obturator gas-operated launcher for  
launching projectiles in decontaminated medium  
[NASA-CASE-NPO-11013] c11 N72-22247  
Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c75 N76-14931
- PROJECTION**  
Projection system for display of parallax and  
perspective  
[NASA-CASE-MFS-23194-1] c35 N78-17357
- PROJECTIVE GEOMETRY**  
Projection system for display of parallax and  
perspective  
[NASA-CASE-MFS-23194-1] c35 N78-17357
- PROJECTORS**  
Optical projector system for establishing  
optimum arrangement of instrument displays in  
aircraft, spacecraft, other vehicles, and  
industrial instrument consoles  
[NASA-CASE-XNP-03853] c23 N71-21882  
System and method for obtaining wide screen  
Schlieren photographs  
[NASA-CASE-NPO-14174-1] c74 N79-20856
- PROPAGATION MODES**  
Dual waveguide mode source for controlling  
amplitudes of two modes  
[NASA-CASE-XNP-03134] c07 N71-10676
- PROPELLANT ACTUATED INSTRUMENTS**  
Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c20 N80-18097
- PROPELLANT ADDITIVES**  
Inhibited solid propellant composition  
containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c28 N79-14228
- PROPELLANT BINDERS**  
Chemical process for production of  
polyisobutylene compounds and application as  
solid rocket propellant binder  
[NASA-CASE-NPO-10893] c27 N73-22710  
Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c28 N81-15119
- PROPELLANT CASTING**  
Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c28 N77-10213  
Solid propellant rocket motor and method of  
making same  
[NASA-CASE-XLA-1349] c20 N77-17143
- PROPELLANT CHEMISTRY**  
Nitramine propellants --- gun propellant burning  
rate  
[NASA-CASE-NPO-14103-1] c28 N78-31255
- PROPELLANT COMBUSTION**  
Spherical solid propellant rocket engine having  
abrupt burnout  
[NASA-CASE-XHQ-01897] c28 N70-35381  
Rocket combustion chamber stability by  
controlling transverse instability during  
propellant combustion  
[NASA-CASE-XLE-04603] c33 N71-21507
- PROPELLANT DECOMPOSITION**  
Unit for generating thrust from catalytic  
decomposition of hydrogen peroxide, for high  
altitude aircraft or spacecraft reaction control  
[NASA-CASE-XMS-00583] c28 N70-38504
- PROPELLANT GRAINS**  
Grain configuration for solid propellant rocket  
engines  
[NASA-CASE-XGS-03556] c27 N70-35534
- PROPELLANT TANKS**  
Liquid rocket systems for propulsion and control  
of spacecraft  
[NASA-CASE-XNP-00610] c28 N70-36910  
Slosh damping method for liquid rocket  
propellant tanks  
[NASA-CASE-XMF-00658] c12 N70-38997  
Expulsion and measuring device for determining  
quantity of liquid in tank under conditions of  
weightlessness  
[NASA-CASE-XMS-01546] c14 N70-40233
- Collapsible auxiliary tank for restarting liquid  
propellant rocket motors under zero gravity  
[NASA-CASE-XNP-01390] c28 N70-41275  
Liquid propellant tank design with semitoroidal  
bulkhead  
[NASA-CASE-XMF-01899] c31 N70-41948  
Microleak detector mounted on weld seam of  
propellant tank of launch vehicle  
[NASA-CASE-XMF-02307] c14 N71-10779  
Fabrication of filament wound propellant tank  
for cryogenic storage  
[NASA-CASE-XLE-03803-2] c15 N71-17651  
Slosh and swirl alleviator for liquid propellant  
tanks during transport and flight  
[NASA-CASE-XLA-05749] c15 N71-19569  
Two phase fluid pressurization system for  
propellant tank  
[NASA-CASE-MSC-12390] c27 N71-29155  
Space vehicle system  
[NASA-CASE-MSC-12561-1] c18 N76-17185  
Passive propellant system  
[NASA-CASE-MFS-23642-2] c20 N78-27176
- PROPELLANT TRANSFER**  
Two component valve assembly for cryogenic  
liquid transfer regulation  
[NASA-CASE-XLE-00397] c15 N70-36492  
Apparatus for cryogenic liquid storage with heat  
transfer reduction and for liquid transfer at  
zero gravity conditions  
[NASA-CASE-XLE-00345] c15 N70-38020  
Continuous variation of propellant flow and  
thrust by application of liquid foam flow  
theory to injection orifice  
[NASA-CASE-XLE-00177] c28 N70-40367  
Method and feed system for separating and  
orienting liquid and vapor phases of liquid  
propellants in zero gravity environment  
[NASA-CASE-XLE-01182] c27 N71-15635  
Electron bombardment ion rocket engine with  
improved propellant introduction system  
[NASA-CASE-XLE-02066] c28 N71-15661  
Rocket combustion chamber stability by  
controlling transverse instability during  
propellant combustion  
[NASA-CASE-XLE-04603] c33 N71-21507  
Vapor-liquid separator design with vapor driven  
pump for separated liquid pumping for  
application in propellant transfer  
[NASA-CASE-XMF-04042] c15 N71-23023  
Filler valve design for supplying liquid  
propellants at high pressure to space vehicles  
[NASA-CASE-XNP-01747] c15 N71-23024  
Internal labyrinth and shield structure to  
improve electrical isolation of propellant  
feed source from ion thruster  
[NASA-CASE-LEW-10210-1] c28 N71-26781  
Flexible bellows joint shielding sleeve for  
propellant transfer pipelines  
[NASA-CASE-XNP-01855] c15 N71-28937  
Passive propellant system  
[NASA-CASE-MFS-23642-2] c20 N78-27176
- PROPELLER BLADES**  
Directed fluid stream for propeller blade  
loading control  
[NASA-CASE-XAC-00139] c02 N70-34856
- PROPORTIONAL CONTROL**  
Proportional controller for regulating aircraft  
or spacecraft motion about three axes  
[NASA-CASE-XAC-03392] c03 N70-41954
- PROPULSION SYSTEM CONFIGURATIONS**  
Electrothermal rocket engine using resistance  
heated heat exchanger  
[NASA-CASE-XLE-00267] c28 N70-33356  
Grain configuration for solid propellant rocket  
engines  
[NASA-CASE-XGS-03556] c27 N70-35534  
Shrouded composite propulsion system configuration  
[NASA-CASE-XLA-01043] c28 N71-10780  
Electrostatic microthrust propulsion system with  
annular slit colloid thruster  
[NASA-CASE-GSC-10709-1] c28 N71-25213  
Method and apparatus for pressurizing propellant  
tanks used in propulsion motor feed system  
[NASA-CASE-XNP-00650] c27 N71-28929  
Apparatus for endoscopic examination ---  
analysis of the propulsion system  
configuration and transmitter  
[NASA-CASE-NFC-14092-1] c52 N80-16725



## PROPULSION SYSTEM PERFORMANCE

Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067

## PROSTHETIC DEVICES

Prosthetic limb with tactile sensing device  
[NASA-CASE-MFS-16570-1] c05 N73-32013  
Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c54 N75-12616  
Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c52 N77-14735  
Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c27 N77-30236  
Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c54 N77-30749  
Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c52 N78-10686  
Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c27 N78-17215  
Compact artificial hand  
[NASA-CASE-NPO-13906-1] c54 N79-24652  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772  
Texturing polymer surfaces by transfer casting --- carotiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c31 N81-16327  
Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c52 N81-25660

## PROTECTION

Camera protecting device for use in photographing rocket engine nozzles or other engine components  
[NASA-CASE-NPO-10174] c14 N71-18465  
Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c27 N76-15310

## PROTECTIVE CLOTHING

Conditioning tanned sharkskin for use as abrasive resistant clothing  
[NASA-CASE-XMS-05691-1] c18 N71-15545  
One piece human garment for use as contamination proof garment  
[NASA-CASE-MSC-12206-1] c05 N71-17599  
Thermoregulating with cooling flow pipe network for humans  
[NASA-CASE-XMS-10269] c05 N71-24147  
Development of improved convolute section for pressurized suits to provide high degree of mobility in response to minimum of applied torque  
[NASA-CASE-XMS-09637-1] c05 N71-24730  
Voice operated receiving and transmitting system for use in protective suits  
[NASA-CASE-KSC-10164] c07 N71-33108  
Protective garment ventilation system  
[NASA-CASE-XMS-04928] c54 N78-17679  
Vitra-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c27 N80-26446

## PROTECTIVE COATINGS

Process permitting application of synthetic resin coating to irregular-shaped objects at ambient temperature  
[NASA-CASE-XNP-06508] c18 N69-39895  
Ultraviolet radiation resistant alkali-metal silicate coatings for temperature control of spacecraft  
[NASA-CASE-XGS-04119] c18 N69-39979  
Application techniques for protecting materials during salt bath brazing  
[NASA-CASE-XLE-00046] c15 N70-33311  
Removable potting compound for instrument shock protection  
[NASA-CASE-XLA-00482] c15 N70-36409  
Passive thermal control coating on aluminum foil laminate for inflatable spacecraft surfaces  
[NASA-CASE-XLA-01291] c33 N70-36617  
Using ethylene oxide in preparation of sterilized solid rocket propellants and encapsulating materials  
[NASA-CASE-XNP-01749] c27 N70-41897  
Fireproof potassium silicate coating composition, insoluble in water after application  
[NASA-CASE-GSC-10072] c18 N71-14014

Development of bacteriostatic conformal coating and methods of application  
[NASA-CASE-GSC-10007] c18 N71-16046  
Vapor deposited laminated nitride-silicon coating for corrosion prevention of carbonaceous surfaces  
[NASA-CASE-XLA-00284] c15 N71-16075  
Flame or plasma spraying for molybdenum coating of carbon or graphite surfaces to prevent oxidative corrosion  
[NASA-CASE-XLA-00302] c15 N71-16077  
Development and characteristics of protective coatings for spacecraft  
[NASA-CASE-XNP-02507] c31 N71-17679  
Development of thermal insulation system for wing and control surfaces of hypersonic aircraft and reentry vehicles  
[NASA-CASE-XLA-00892] c33 N71-17897  
Bismuth and lead surface coatings for gas bearings in aerospace engineering  
[NASA-CASE-XGS-02011] c15 N71-20739  
Composition and production method of alkali metal silicate paint with ultraviolet reflection properties  
[NASA-CASE-XGS-04799] c18 N71-24183  
Method for treating metal surfaces to prevent secondary electron transmission  
[NASA-CASE-XNP-09469] c24 N71-25555  
Development of solid state polymer coating for obtaining thermal balance in spacecraft components  
[NASA-CASE-XLA-01745] c33 N71-28903  
Method for coating through-holes in ceramic substrates used in fabricating miniaturized electronic circuits  
[NASA-CASE-XMF-05999] c15 N71-29032  
Zinc dust formulation for abrasion resistant steel coatings  
[NASA-CASE-GSC-10361-1] c18 N72-23581  
Development of process for constructing protective covers for solar cells  
[NASA-CASE-GSC-11514-1] c03 N72-24037  
Resin for protecting p-n semiconductor junction surface  
[NASA-CASE-ERC-10339-1] c18 N73-30532  
Nonflammable coating compositions --- for use in high oxygen environments  
[NASA-CASE-MFS-20486-2] c27 N74-17283  
Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c27 N76-16229  
High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c27 N77-13217  
Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c24 N77-19170  
Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c24 N78-14096  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c24 N78-24290  
Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c27 N78-32260  
Infusible silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMF-02526-1] c27 N79-21190  
Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c15 N79-26100  
Improved refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c26 N80-14232  
A silicon-slurry/aluminide coating --- protects aircraft and land-based gas turbine engines  
[NASA-CASE-LEW-13343-1] c24 N80-26389  
Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c34 N81-12363  
Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c26 N81-16209  
Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c26 N81-25188  
Thermal control coatings based on trialkoxysilane hydrolysate binders --- tolerance to ultraviolet radiation in vacuum



- [NASA-CASE-MFS-25620-1] c24 N82-11118
- PROTECTORS**  
Load cell protection device using spring-loaded breakaway mechanism  
[NASA-CASE-ZMS-06782] c32 N71-15974  
Payload soft landing system using stowable gas bag  
[NASA-CASE-XLA-09881] c31 N71-16085
- PROTEINS**  
Protein sterilization of firefly luciferase without denaturation  
[NASA-CASE-GSC-10225-1] c06 N73-27086
- PROTON FLUX DENSITY**  
Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c19 N74-29410
- PROXIMITY**  
Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c74 N81-22894
- PSEUDONOISE**  
System designed to reduce time required for obtaining synchronization in data communication with spacecraft utilizing pseudonoise codes  
[NASA-CASE-NPO-10214] c10 N71-26577  
Linear shift register with feedback logic for generating pseudonoise linear recurring binary sequences  
[NASA-CASE-NPO-11406] c08 N73-12175  
Multicarrier communications system for transmitting modulated signals from single transmitter  
[NASA-CASE-NPO-11548] c07 N73-26118  
Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c35 N75-21582  
Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c32 N81-15179
- PULLEYS**  
Apparatus for measuring load on cable under static or dynamic conditions comprising pulleys pivoting structure against restraint of tension strap  
[NASA-CASE-XMS-04545] c15 N71-22878  
Tensile strength testing device having pulley guides for exerting multiple forces on test specimen  
[NASA-CASE-XNP-05634] c15 N71-24834
- PULMONARY CIRCULATION**  
Pulmonary resuscitation method and apparatus with adjustable pressure regulator  
[NASA-CASE-XMS-01115] c05 N70-39922
- PULMONARY FUNCTIONS**  
Piston device for producing known constant positive pressure within lungs by using thoracic muscles  
[NASA-CASE-XMS-01615] c05 N70-41329
- PULSE AMPLITUDE**  
Monitoring system for signal amplitude ranges over predetermined time interval  
[NASA-CASE-XMS-04061-1] c09 N69-39885  
Analog to digital converter for converting pulses to frequencies  
[NASA-CASE-XLA-00670] c08 N71-12501  
Electrical testing apparatus for detecting amplitude and width of transient pulse  
[NASA-CASE-XMF-06519] c09 N71-12519  
Analog to digital converter circuit for pulse height analysis  
[NASA-CASE-XNP-00477] c08 N73-28045  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c33 N77-26387  
Speech analyzer  
[NASA-CASE-GSC-11898-1] c32 N77-30309  
Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c33 N81-27395
- PULSE AMPLITUDE MODULATION**  
Voltage controlled oscillators and pulse amplitude modulation for signal ratio system  
[NASA-CASE-XMF-04367] c09 N71-23545
- PULSE CODE MODULATION**  
Adaptive compression signal processor for PCM communication systems  
[NASA-CASE-XLA-03076] c07 N71-11266  
Bipolar phase detector and corrector for split phase PCM data signals  
[NASA-CASE-XGS-01590] c07 N71-12392  
System for recording and reproducing PCM data from data stored on magnetic tape
- [NASA-CASE-XGS-01021] c08 N71-21042  
Frequency shift keying apparatus for use with pulse code modulation data transmission system  
[NASA-CASE-XGS-01537] c07 N71-23405  
Data reduction and transmission system for TV PCM data  
[NASA-CASE-NPC-11243] c07 N72-20154  
Pulse code modulated data from frequency multiplex communications by digital phase shift or carrier  
[NASA-CASE-NPO-11338] c08 N72-25208  
Bit synchronization of PCM communications signal, without separate synchronization channel by digital correlation  
[NASA-CASE-NFC-11302-1] c07 N73-13149  
Method and apparatus for a single channel digital communications system --- synchronization of received PCM signal by digital correlation with reference signal  
[NASA-CASE-NFO-11302-2] c32 N74-10132  
Multifunction audio digitizer --- producing direct delta and pulse code modulation  
[NASA-CASE-MSC-13855-1] c35 N74-17885  
Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12462-1] c32 N74-20809  
Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12494-1] c32 N74-20810  
Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c32 N75-21486  
Compact bi-phase pulse coded modulation decoder  
[NASA-CASE-KSC-10834-1] c33 N76-14371  
Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c32 N76-16249  
Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c32 N77-12239  
Digital demodulator  
[NASA-CASE-LAR-12659-1] c33 N80-31731
- PULSE COMMUNICATION**  
Phase shift data transmission system with pseudo-noise synchronization code modulated with digital data into single channel for spacecraft communication  
[NASA-CASE-XNE-00911] c08 N70-41961  
Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c32 N77-12239
- PULSE DURATION**  
Frequency to analog converters with unipolar field effect transistor for determining potential charge by pulse duration of input signal  
[NASA-CASE-XNP-07040] c08 N71-12500  
Electrical testing apparatus for detecting amplitude and width of transient pulse  
[NASA-CASE-XMF-06519] c09 N71-12519  
Design and development of variable pulse width multiplier  
[NASA-CASE-XLA-02850] c09 N71-20447  
Device for voltage conversion using controlled pulse widths and arrangements to generate ac output voltage  
[NASA-CASE-MFS-10068] c10 N71-25139  
One shot multivibrator circuit for producing long duration output pulses  
[NASA-CASE-ARC-10137-1] c09 N71-28468  
Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c33 N74-32711
- PULSE DURATION MODULATION**  
Pulse duration modulation multiplier system  
[NASA-CASE-XEB-09213] c07 N71-12390  
Variable duration pulse integrator design for integrating pulse duration modulated pulses with elimination of ripple content  
[NASA-CASE-XLA-01219] c10 N71-23084  
Electric motor control system with pulse width modulation for providing automatic null seeking servo  
[NASA-CASE-XMF-05195] c10 N71-24861  
Pulse duration control device for driving slow response time loads in selected sequence including switching and delay circuits and magnetic storage  
[NASA-CASE-XGS-04224] c10 N71-26418  
Monostable multivibrator for producing output pulse widths with positive feedback NOR gates  
[NASA-CASE-MSC-13492-1] c10 N71-28860  
Load current sensor for series pulse width modulated power supply

- [NASA-CASE-GSC-10656-1] c09 N72-25249  
Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c33 N81-19392
- PULSE FREQUENCY MODULATION**  
Electric current measuring apparatus design including saturable core transformer and energy storage device to avoid magnetizing current errors from transformer output winding [NASA-CASE-XGS-02439] c14 N71-19431  
Digitally controlled frequency synthesizer for pulse frequency modulation telemetry systems [NASA-CASE-XGS-02317] c09 N71-23525  
Noninterruptable digital counter circuit design with display device for pulse frequency modulation [NASA-CASE-XNP-09759] c08 N71-24891  
Threshold extension device for improving operating performance of frequency modulation demodulators by eliminating click-type noise impulses [NASA-CASE-MS-C-12165-1] c07 N71-33696  
Versatile LDV burst simulator [NASA-CASE-LAR-11859-1] c35 N79-14349
- PULSE GENERATORS**  
High voltage pulse generator for testing flash and ignition limits of nonmetallic materials in controlled atmospheres [NASA-CASE-MS-C-12178-1] c09 N71-13518  
Interrogator and current driver circuit for combination with transistor flip-flop circuit [NASA-CASE-XGS-03058] c10 N71-19547  
Electric circuit for producing high current pulse having fast rise and fall time [NASA-CASE-XMS-04919] c09 N71-23270  
Pulse generator for synchronizing or resetting electronic signals without requiring separate external source [NASA-CASE-XGS-03632] c09 N71-23311  
Development and characteristics of resettable monostable pulse generator with charge rundown-timing circuit [NASA-CASE-GSC-11139] c09 N71-27016  
Pulse generating circuit for operation at very high duty cycles and repetition rates [NASA-CASE-XNP-00745] c10 N71-28960  
Pulse coupling circuit with switch between generator and winding [NASA-CASE-LEW-10433-1] c09 N72-22197  
Method and apparatus for nondestructive testing --- using high frequency arc discharges [NASA-CASE-MFS-21233-1] c38 N74-15395  
Random pulse generator [NASA-CASE-MS-C-14131-1] c33 N75-19515  
Frequency tracked pulse technique for ultrasonic analysis [NASA-CASE-LAR-12697-1] c32 N80-26571  
Active lamp pulse driver circuit --- for use in laser transmitters [NASA-CASE-GSC-12566-1] c36 N82-10390
- PULSE RATE**  
Circuit for measuring wide range of pulse rates by utilizing high capacity counter [NASA-CASE-XNP-06234] c10 N71-27137  
Peak holding circuit for extremely narrow pulses [NASA-CASE-MS-C-14129-1] c33 N75-18479  
Pulse transducer with artifact signal attenuator --- heart rate sensors [NASA-CASE-FRC-11012-1] c52 N80-23969
- PULSED LASERS**  
Repetitively pulsed wavelength selective carbon dioxide laser [NASA-CASE-ERC-10178] c16 N71-24832  
Dually mode locked Nd:YAG laser [NASA-CASE-GSC-11746-1] c36 N75-19654  
Isotope separation using metallic vapor lasers [NASA-CASE-NPO-13550-1] c36 N77-26477  
Coherently pulsed laser source [NASA-CASE-NPO-15111-1] c36 N80-24602  
Tunable injection-locked pulsed CO2 laser [NASA-CASE-NPO-14984-1] c36 N81-15350  
Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect [NASA-CASE-NPO-14657-1] c74 N81-17887  
Method of and apparatus for double-exposure holographic interferometry [NASA-CASE-MFS-25405-1] c35 N81-27459
- Active lamp pulse driver circuit --- for use in laser transmitters [NASA-CASE-GSC-12566-1] c36 N82-10390
- PULSED RADIATION**  
Development and characteristics of cyclically operable, optical shutter for use as focal plane shutter for transmitting single radiation pulses [NASA-CASE-NFO-10758] c14 N73-14427
- PULSES**  
High resolution radar transmitting system for transmitting optical pulses to targets [NASA-CASE-NPO-11426] c07 N73-26119
- PUMP SEALS**  
Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants [NASA-CASE-XNP-08881] c17 N71-28747  
Spiral groove seal --- for hydraulic rotating shaft [NASA-CASE-LEW-10326-3] c37 N74-10474
- PUMPS**  
Piezoelectric pump for supplying fluid at high frequencies to gyroscope fluid suspension system [NASA-CASE-XNP-05429] c26 N71-21824  
Vapor-liquid separator design with vapor driven pump for separated liquid pumping for application in propellant transfer [NASA-CASE-XNP-04042] c15 N71-23023  
Automatically reciprocating, high pressure pump for use in spacecraft cryogenic propellants [NASA-CASE-XNP-04731] c15 N71-24042  
Development and characteristics of variable displacement fluid pump for transforming hydraulic pressures [NASA-CASE-MFS-20830] c15 N71-30028  
Pumping and metering dual piston system and monitor for reaction chamber constituents [NASA-CASE-GSC-10218-1] c15 N72-21465  
Magnetocaloric pump --- for cryogenic fluids [NASA-CASE-LEW-11672-1] c37 N74-27904  
Continuous coal processing method [NASA-CASE-NPO-13758-2] c31 N81-15154  
A gas-to-hydraulic power converter [NASA-CASE-MS-C-18794-1] c37 N81-24445
- PUNCHED CARDS**  
Describing device for flagging punched business cards [NASA-CASE-XLA-02705] c08 N71-15908  
Handling tool for printed circuit cards [NASA-CASE-MFS-20453] c15 N71-29133
- PUNCHES**  
Punch and die device for forming convolution series in thin gage metal hemispheres [NASA-CASE-XNP-05297] c15 N71-23811
- PURGING**  
Carbon dioxide purge systems to prevent condensation in spaces between cryogenic fuel tanks and hypersonic vehicle skin [NASA-CASE-XLA-01967] c31 N70-42015  
Developing high pressure gas purification and filtration system for use in test operations of space vehicles [NASA-CASE-MFS-12806] c14 N71-17588  
Fluid transferring system design for purging toxic, corrosive, or noxious fluids and fumes from materials handling equipment for cleansing and accident prevention [NASA-CASE-XMS-01905] c12 N71-21089  
Device for back purging thrust engines [NASA-CASE-XMS-04826] c28 N71-28849  
Purging means and method for Xenon arc lamps [NASA-CASE-NPO-11978] c31 N78-17238
- PURIFICATION**  
Apparatus and method capable of receiving large quantity of high pressure helium, removing impurities, and discharging at received pressure [NASA-CASE-XMF-06888] c15 N71-24044  
Purification apparatus for vaporization and fractional distillation of liquids [NASA-CASE-XNP-08124] c15 N71-27184  
Targets for producing high purity I-123 [NASA-CASE-LEW-10518-3] c25 N78-27226  
Process for purification of waste water produced by a Kraft process pulp and paper mill [NASA-CASE-NPO-13847-2] c85 N79-17747  
Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control

[NASA-CASE-NPO-14474-1] c26 N80-14229  
 Membrane consisting of polyquaternary amine ion  
 exchange polymer network interpenetrating the  
 chains of thermoplastic matrix polymer  
 [NASA-CASE-NPO-14001-1] c27 N81-14076  
 Electromigration process for the purification of  
 molten silicon during crystal growth  
 [NASA-CASE-NPO-14831-1] c76 N81-19944

**PURITY**  
 Synthesis of high purity dianilinosilanes  
 [NASA-CASE-XMF-06409] c06 N71-23230

**PUSH-PULL AMPLIFIERS**  
 Frequency modulated oscillator  
 [NASA-CASE-MFS-23181-1] c33 N77-17351  
 Low current linearization of magnetic amplifier  
 for dc transducer  
 [NASA-CASE-NPO-14617-1] c33 N81-24338  
 Push-pull converter with energy saving circuit  
 for protecting switching transistors from peak  
 power stress  
 [NASA-CASE-NPO-14316-1] c33 N81-33404

**PYLONS**  
 Decoupler pylon: Wing/store flutter suppressor  
 [NASA-CASE-LAR-12468-1] c08 N80-22359

**PYRIDINES**  
 Nuclear alkylated pyridine aldehyde polymers and  
 conductive compositions thereof  
 [NASA-CASE-NPO-10557] c27 N78-17214

**PYROELECTRICITY**  
 Pyroelectric detector arrays  
 [NASA-CASE-LAR-12363-1] c35 N81-12389

**PYROGEN**  
 Molded composite pyrogen igniter for rocket motors  
 --- solid propellant ignition  
 [NASA-CASE-LAR-12018-1] c20 N78-24275

**PYROLYSIS**  
 Thermal reactor and process --- liquid silicon  
 production from silane  
 [NASA-CASE-NPO-14369-1] c25 N80-20338  
 Molten salt pyrolysis of latex --- synthetic  
 hydrocarbon fuel production using the Guayule  
 shrub  
 [NASA-CASE-NPO-14315-1] c27 N81-17261

**PYROLYTIC GRAPHITE**  
 Multislotted film cccled pyrolytic graphite rocket  
 nozzle  
 [NASA-CASE-XP-04389] c28 N71-20942

**PYROLYTIC MATERIALS**  
 Design, development, and characteristics of  
 ablation structures  
 [NASA-CASE-XMS-01816] c33 N71-15623

**PYROMETERS**  
 Sensor device with switches for measuring  
 surface recession of charring and noncharring  
 ablators  
 [NASA-CASE-XLA-01781] c14 N69-39975

**PYROTECHNICS**  
 Development and characteristics of squib  
 actuated explosive disconnect for spacecraft  
 release from launch vehicle  
 [NASA-CASE-NPO-11330] c33 N73-26958

## Q

**Q SWITCHED LASERS**  
 Optically detonated explosive device  
 [NASA-CASE-NPO-11743-1] c28 N74-27425  
 Spatial filter for Q-switched lasers  
 [NASA-CASE-LEW-12164-1] c36 N77-32478

**Q VALUES**  
 Design of active RC network capable of operating  
 at high Q values with reduced sensitivity to  
 gain amplification and number of passive  
 components  
 [NASA-CASE-ARC-10042-2] c10 N72-11256

**QUADRATIC PROGRAMMING**  
 Quadrature demodulation  
 [NASA-CASE-GSC-12137-1] c33 N78-32338

**QUADRATURES**  
 Automatic quadrature control and measuring system  
 --- using optical coupling circuitry  
 [NASA-CASE-MFS-21660-1] c35 N74-21017

**QUALITATIVE ANALYSIS**  
 Ultraviolet chromatographic detector for  
 quantitative and qualitative analysis of  
 compounds  
 [NASA-CASE-HCN-10756-1] c14 N72-25428  
 Analysis of volatile organic compounds --- trace  
 amounts of organic volatiles in gas samples

[NASA-CASE-MSC-14428-1] c23 N77-17161  
 Fluid sample collection and distribution system  
 --- qualitative analysis of aqueous samples  
 from several points  
 [NASA-CASE-MSC-16841-1] c34 N79-24285

**QUANTITATIVE ANALYSIS**  
 Mixed liquid and vapor phase analyzer design  
 with thermocouples for relative heat transfer  
 measurement  
 [NASA-CASE-NPO-10691] c14 N71-26199  
 Quantitative liquid measurements in container by  
 resonant frequencies  
 [NASA-CASE-XP-02500] c18 N71-27397  
 Ultraviolet chromatographic detector for  
 quantitative and qualitative analysis of  
 compounds  
 [NASA-CASE-HCN-10756-1] c14 N72-25428  
 Nondispersive gas analysis using radiation  
 detection for quantitative analysis  
 [NASA-CASE-ARC-10308-1] c06 N72-31141  
 Analysis of volatile organic compounds --- trace  
 amounts of organic volatiles in gas samples  
 [NASA-CASE-MSC-14428-1] c23 N77-17161  
 Electrophotolysis oxidation system for  
 measurement of organic concentration in water  
 [NASA-CASE-MSC-16497-1] c25 N82-12166  
 Method and apparatus for detecting coliform  
 organisms  
 [NASA-CASE-ARC-11322-1] c51 N82-12739

**QUANTUM THEORY**  
 III-V photocathode with nitrogen doping for  
 increased quantum efficiency  
 [NASA-CASE-NPO-12134-1] c33 N76-31409

**QUARTZ**  
 Ultraviolet filter of thorium fluoride and  
 cryolite on quartz base  
 [NASA-CASE-XP-02340] c23 N69-24332  
 Method for attaching a fused-quartz mirror to a  
 conductive metal substrate  
 [NASA-CASE-MFS-23405-1] c26 N77-29260  
 Quartz ball value  
 [NASA-CASE-NPO-14473-1] c37 N80-23654

**QUARTZ LAMPS**  
 High intensity heat and light unit containing  
 quartz lamp elements protectively positioned  
 to withstand severe environmental stress  
 [NASA-CASE-XLA-00141] c09 N70-33312  
 Light shield and cooling apparatus --- high  
 intensity ultraviolet lamp  
 [NASA-CASE-LAR-10089-1] c34 N74-23066

## R

**RACKS (FRAMES)**  
 Design and development of test stand system for  
 supporting test items in vacuum chamber  
 [NASA-CASE-MFS-21362] c11 N73-20267  
 Thrust-isolating mounting --- characteristics of  
 support for loads mounted in spacecraft  
 [NASA-CASE-MFS-21680-1] c18 N74-27397  
 Automated syringe sampler --- remote sampling of  
 air and water  
 [NASA-CASE-LAR-12308-1] c35 N81-29407

**RADAR ANTENNAS**  
 Interferometric tuning acquisition and tracking  
 radar antenna system  
 [NASA-CASE-XMS-09610] c07 N71-24625  
 Variable beamwidth antenna --- with multiple  
 beam, variable feed system  
 [NASA-CASE-GSC-11862-1] c32 N76-18295  
 Highly efficient antenna system using a  
 corrugated horn and scanning hyperbolic  
 reflector  
 [NASA-CASE-NPO-13568-1] c32 N76-21365  
 Baseband signal combiner for large aperture  
 antenna array  
 [NASA-CASE-NPO-14641-1] c32 N81-29308

**RADAR ATTENUATION**  
 FM/CW radar system  
 [NASA-CASE-MFS-22234-1] c32 N79-10264

**RADAR DATA**  
 Charge-coupled device data processor for an  
 airborne imaging radar system  
 [NASA-CASE-NPO-13587-1] c32 N77-32342

**RADAR ECHOES**  
 Charge-coupled device data processor for an  
 airborne imaging radar system  
 [NASA-CASE-NPO-13587-1] c32 N77-32342

**RADAR EQUIPMENT**

Spacecraft transponder and ground station radar system for mapping planetary surfaces  
[NASA-CASE-NPO-11001] c07 N72-21118  
FH/CW radar system  
[NASA-CASE-MFS-22234-1] c32 N79-10264

**RADAR IMAGERY**

Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c32 N77-21267  
Clutter free synthetic aperture radar correlator  
[NASA-CASE-NFO-14035-1] c32 N78-18266  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NFO-14525-1] c32 N79-19195  
Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c43 N80-18498  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NFO-14525-2] c32 N80-32607  
Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NFO-14054-1] c32 N82-12297

**RADAR MEASUREMENT**

Thickness measurement system  
[NASA-CASE-MFS-23721-1] c31 N79-28370

**RADAR RANGE**

Radar signal receiver arrangement for extending range and increasing signal to noise ratio  
[NASA-CASE-XNP-00748] c07 N70-36911

**RADAR RECEIVERS**

Polarization diversity monopulse tracking receiver design without radio frequency switches  
[NASA-CASE-XGS-03501] c09 N71-20864

**RADAR RECEPTION**

Radar signal receiver arrangement for extending range and increasing signal to noise ratio  
[NASA-CASE-XNP-00748] c07 N70-36911

**RADAR REFLECTORS**

Inflatable radar reflector unit - lightweight, highly reflective to electromagnetic radiation, and adaptable for erection and deployment with minimum effort and time  
[NASA-CASE-XMS-00893] c07 N70-40063  
Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c32 N77-21267

**RADAR TARGETS**

Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c43 N80-18498  
Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c32 N82-10286

**RADAR TRACKING**

Tracking antenna system with array for synchronous satellite or ground based radar  
[NASA-CASE-GSC-10553-1] c07 N71-19854  
Polarization diversity monopulse tracking receiver design without radio frequency switches  
[NASA-CASE-XGS-03501] c09 N71-20864  
Monopulse tracking system with antenna array of three radiators for deriving azimuth and elevation indications  
[NASA-CASE-XGS-01155] c10 N71-21483  
Plastic sphere for radar tracking and calibration  
[NASA-CASE-XLA-11154] c07 N72-21117

**RADAR TRANSMITTERS**

High resolution radar transmitting system for transmitting optical pulses to targets  
[NASA-CASE-NPO-11426] c07 N73-26119

**RADIAL FLOW**

Radial heat flux transformer for use in heating and cooling processes  
[NASA-CASE-NPO-10828] c33 N72-17948  
Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c37 N76-18459

**RADIANCE**

Method and apparatus for measuring shock layer radiation distribution about high velocity objects  
[NASA-CASE-XAC-02970] c14 N69-39896

**RADIANT COOLING**

Direct radiation cooling of linear beam collector tubes  
[NASA-CASE-XNP-09227] c15 N69-24319

High thermal emittance black surface coatings and process for applying to metal and metal alloy surfaces used in radiative cooling of spacecraft  
[NASA-CASE-XLA-06199] c15 N71-24875  
Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c26 N77-29260  
Radiative cooler  
[NASA-CASE-NFO-15465-1] c18 N82-10106

**RADIANT FLUX DENSITY**

High intensity radiant energy pulse source for calibrating heat transfer gages with thermoluminescent shutter activation  
[NASA-CASE-ARC-10178-1] c09 N72-17152  
Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c33 N80-18287

**RADIANT HEATING**

High intensity heat and light unit containing quartz lamp elements protectively positioned to withstand severe environmental stress  
[NASA-CASE-XLA-00141] c09 N70-33312  
High temperature source of thermal radiation  
[NASA-CASE-XLE-00490] c33 N70-34545  
Refractory filament series circuitry for radiant heater  
[NASA-CASE-XLE-00387] c33 N70-34812  
Unfired ceramic insulation for protection from radiant heating environments  
[NASA-CASE-MFS-14253] c33 N71-24858  
Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c44 N78-10554  
High thermal power density heat transfer --- thermionic converters  
[NASA-CASE-LEW-12950-1] c34 N82-11399

**RADIATION**

Development of radiant energy sensor to detect the radiant energy wavelength bands from portions of radiating body  
[NASA-CASE-ERC-10174] c14 N72-25409  
Development of thermopile with sensor surface to receive radiant energy and to provide measurement of energy quantity  
[NASA-CASE-NPO-11493] c14 N73-12447  
Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c60 N77-32731  
Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c60 N78-10709

**RADIATION ABSORPTION**

NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c35 N75-30502  
Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c44 N79-11469

**RADIATION COUNTERS**

Particle detector for indicating incidence and energy of minute space particles  
[NASA-CASE-XLA-00135] c14 N70-33322  
Sensing method and device for determining orientation of space vehicle or satellite by using particle traps  
[NASA-CASE-XGS-00466] c21 N70-34297  
Particle beam power density detection and measurement apparatus  
[NASA-CASE-XLE-00243] c14 N70-38602  
Automatic baseline stabilization for ionization detector used in gas chromatograph  
[NASA-CASE-XNF-03128] c10 N70-41991  
Method of forming thin window drifted silicon charged particle detector  
[NASA-CASE-XLE-00808] c24 N71-10560  
Development of dosimeter for measuring absorbed dose of high energy ionizing radiation  
[NASA-CASE-XLA-03645] c14 N71-20430  
Apparatus for detecting particle emission lower than noise level of multiplier tube  
[NASA-CASE-XLA-07813] c14 N72-17328  
Radiation or charged particle detector and amplifier  
[NASA-CASE-NPO-12128-1] c14 N73-32317  
Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c35 N74-26949  
Particle parameter analyzing system --- x-y plotter circuits and display

- [NASA-CASE-XLE-06094] c33 N78-17293  
Method and means for helium/hydrogen ratio  
measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c25 N80-20334
- RADIATION DAMAGE**  
Addition of group 3 elements to silicon  
semiconductor material for increased  
resistance to radiation damage in solar cells  
[NASA-CASE-XLE-02798] c26 N71-23654  
Recovering efficiency of solar cells damaged by  
environmental radiation through thermal  
annealing  
[NASA-CASE-XGS-04047-2] c03 N72-11062  
Photomultiplier circuit including means for  
rapidly reducing the sensitivity thereof ---  
and protection from radiation damage  
[NASA-CASE-ARC-10593-1] c33 N74-27682
- RADIATION DETECTORS**  
Radiation source and detection system for  
measuring amount of liquid inside tanks  
independently of liquid configuration  
[NASA-CASE-MSC-12280] c27 N71-16348  
Detection instrument for light emitted from ATP  
biochemical reaction  
[NASA-CASE-XGS-05534] c23 N71-16355  
Attitude sensor with scanning mirrors for  
detecting orientation of space vehicle with  
respect to planet  
[NASA-CASE-XLA-0C793] c21 N71-22880  
Mosaic semiconductor radiation detector and  
position indicator systems engineering for low  
energy particles  
[NASA-CASE-XGS-03230] c14 N71-23401  
Nondispersive gas analysis using radiation  
detection for quantitative analysis  
[NASA-CASE-ARC-10308-1] c06 N72-31141  
Radiation source tracker comprised of sector  
matrix of detectors with output voltages  
corresponding to irradiance levels  
[NASA-CASE-NPO-11686] c14 N73-25462  
Radiation or charged particle detector and  
amplifier  
[NASA-CASE-NPO-12128-1] c14 N73-32317  
Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c35 N74-15091  
High field Cds detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c35 N74-18088  
Flame detector operable in presence of proton  
radiation  
[NASA-CASE-MFS-21577-1] c19 N74-29410  
Wide angle sun sensor --- consisting of  
cylinder, insulation and pair of detectors  
[NASA-CASE-NPO-13327-1] c35 N75-23910  
Detector absorptivity measuring method and  
apparatus  
[NASA-CASE-LAR-10907-1] c35 N76-29551  
Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c35 N79-33449  
Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c35 N81-12388  
X-ray position detector  
[NASA-CASE-NPO-12087-1] c74 N81-19898
- RADIATION DISTRIBUTION**  
Space simulator with uniform test region  
radiation distribution, adapted to simulate  
Venus solar radiations  
[NASA-CASE-XNP-00459] c11 N70-38675
- RADIATION DOSAGE**  
Development of dosimeter for measuring absorbed  
dose of high energy ionizing radiation  
[NASA-CASE-XLA-03645] c14 N71-20430  
Method for analyzing radiation sensitivity of  
integrated circuits  
[NASA-CASE-NPO-14350-1] c33 N80-14332
- RADIATION EFFECTS**  
Method for temperature compensating  
semiconductor gages by exposure to high energy  
radiation  
[NASA-CASE-XLA-04555-1] c14 N71-25892
- RADIATION HARDENING**  
Radiation hardening of MOS devices by boron ---  
for stabilizing gate threshold potential of  
field effect device  
[NASA-CASE-GSC-11425-1] c76 N74-20329
- RADIATION HAZARDS**  
Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c35 N81-12388
- RADIATION MEASUREMENT**  
Development of thermopile with sensor surface to  
receive radiant energy and to provide  
measurement of energy quantity  
[NASA-CASE-NPO-11493] c14 N73-12447
- RADIATION MEASURING INSTRUMENTS**  
Rocket-borne aspect sensor consisting of  
radiation sensor, apertured disk, commutator,  
and counting circuits  
[NASA-CASE-XGS-08266] c14 N69-27432  
Infrared scanning system for maintaining  
spacecraft orientation with earth reference  
[NASA-CASE-XLA-00120] c21 N70-33181  
Multiple wavelength radiation measuring  
instrument for determining hot body or gas  
temperature  
[NASA-CASE-XLE-00011] c14 N70-41946  
Development of method for improving signal to  
noise ratio and accuracy of Wheatstone bridge  
type radiation measuring instrument  
[NASA-CASE-XLA-02810] c14 N71-25901  
Development of thermopile with sensor surface to  
receive radiant energy and to provide  
measurement of energy quantity  
[NASA-CASE-NPO-11493] c14 N73-12447  
Phototransistor with base collector junction  
diode for integration into photo sensor arrays  
[NASA-CASE-MFS-20407] c09 N73-19235  
Method and apparatus for measuring  
electromagnetic radiation  
[NASA-CASE-LEW-11159-1] c14 N73-28488  
Design of gamma ray spectrometer for measurement  
of intense radiation using Compton scattering  
effect  
[NASA-CASE-MFS-21441-1] c14 N73-30392  
Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c35 N74-26949  
Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c47 N80-26992
- RADIATION MEDICINE**  
Method of producing I-123 --- by bombardment of  
cesium causing spallation  
[NASA-CASE-LEW-11390-2] c25 N76-27383
- RADIATION PROTECTION**  
Development of method for protecting large and  
oddly shaped areas from radiant and convective  
heat  
[NASA-CASE-XNP-01310] c33 N71-28852  
Cooling and radiation protection of ruby lasers  
using copper sulfate solution in alcohol  
[NASA-CASE-MFS-20180] c16 N72-12440  
Photomultiplier circuit including means for  
rapidly reducing the sensitivity thereof ---  
and protection from radiation damage  
[NASA-CASE-ARC-10593-1] c33 N74-27682
- RADIATION SHIELDING**  
Encapsulated heater forming hollow body for  
cathode used in ion thruster  
[NASA-CASE-LEW-10814-1] c28 N70-35422  
Describing hot filament type Bayard-Alpert  
ionization gage with ion collector buried or  
removed from grid structure  
[NASA-CASE-XLA-07424] c14 N71-18482  
Sealed housing for protecting electronic  
equipment against electromagnetic interference  
[NASA-CASE-MSC-12168-1] c09 N71-18600  
Internal labyrinth and shield structure to  
improve electrical isolation of propellant  
feed source from ion thruster  
[NASA-CASE-LEW-10210-1] c28 N71-26781  
Apparatus for aligning shadow shields and  
cryogenic storage tanks in outer space with  
the sun  
[NASA-CASE-KSC-10622-1] c31 N72-21893  
Light shield and cooling apparatus --- high  
intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c34 N74-23066
- RADIATION SOURCES**  
Sight switch using infrared source and sensor  
mounted beside eye  
[NASA-CASE-XNP-03934] c09 N71-22985  
Apparatus for obtaining isotropic irradiation on  
film emulsion from parallel radiation source  
[NASA-CASE-MFS-20095] c24 N72-11595  
Radiation source tracker comprised of sector  
matrix of detectors with output voltages  
corresponding to irradiance levels  
[NASA-CASE-NPO-11686] c14 N73-25462  
High powered arc electrodes --- producing solar  
simulator radiation  
[NASA-CASE-LEW-11162-1] c33 N74-12913

- Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c33 N75-29318
- RADIATION SPECTRA**  
Maksutov spectrograph for low light level research  
[NASA-CASE-XLA-10402] c14 N71-29041
- RADIATION TOLERANCE**  
Ultraviolet radiation resistant alkali-metal silicate coatings for temperature control of spacecraft  
[NASA-CASE-XGS-04119] c18 N69-39979
- Doping silicon material with gadolinium to increase radiation resistance of solar cells  
[NASA-CASE-XLE-02792] c26 N71-10607
- Improving radiation resistance of silicon semiconductor junctions by doping with lithium  
[NASA-CASE-XGS-07801] c09 N71-12513
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c76 N75-25730
- Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c33 N80-14332
- RADIATIVE HEAT TRANSFER**  
Heat flux sensor assembly with proviso for heat shield to reduce radiative transfer between sensor elements  
[NASA-CASE-XMS-05909-1] c14 N69-27459
- Capillary radiator for carrying heat transfer liquid in planetary spacecraft structures  
[NASA-CASE-XLE-03307] c33 N71-14035
- Transient heat transfer gage for measuring total radiant intensity from far ultraviolet and ionized high temperature gases  
[NASA-CASE-XNP-09802] c33 N71-15641
- Construction and method of arranging plurality of ion engines to form cluster thereby increasing efficiency and control by decreasing heat radiated to space  
[NASA-CASE-XNP-02923] c28 N71-23081
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MPS-25436-1] c76 N81-30012
- Radiative cooler  
[NASA-CASE-NPO-15465-1] c18 N82-10106
- RADIATORS**  
Development and characteristics of natural circulation radiator for use with nuclear power plants installed in lunar space stations  
[NASA-CASE-XHQ-03673] c33 N71-29046
- RADIO ANTENNAS**  
Low loss parasitic probe antenna for prelaunch tests of spacecraft antennas  
[NASA-CASE-XKS-09348] c09 N71-13521
- VHF/UHF parasitic probe antenna for spacecraft communication  
[NASA-CASE-XKS-09340] c07 N71-24614
- Development and characteristics of extensible dipole antenna using deformable tubular metallic strip element  
[NASA-CASE-HQN-00937] c07 N71-28979
- Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c32 N76-21365
- RADIO ASTRONOMY**  
Synchronous detection system for detecting weak radio astronomical signals  
[NASA-CASE-XNP-09832] c30 N71-23723
- RADIO BEACONS**  
RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c44 N78-28594
- RADIO COMMUNICATION**  
System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c32 N79-20296
- RADIO CONTROL**  
Radio frequency controlled solid state switch  
[NASA-CASE-ARC-10136-1] c09 N72-22202
- RADIO EQUIPMENT**  
System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c32 N79-20296
- RADIO FREQUENCIES**  
Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c07 N69-24323
- Automatic gain control amplifier system  
[NASA-CASE-XMS-05307] c09 N69-24330
- Method and apparatus for bowing of instrument panels to improve radio frequency shielded enclosure  
[NASA-CASE-XMF-09422] c07 N71-19436
- Development of automatic frequency discriminators and control for phase lock loop providing frequency preset capabilities  
[NASA-CASE-XMF-08665] c10 N71-19467
- System generating sidereal frequency signals from signals of standard solar frequency without use of mixing operations or feedback loops  
[NASA-CASE-XGS-02610] c14 N71-23174
- Radio frequency coaxial filter to provide dc isolation and low frequency signal rejection in audio range  
[NASA-CASE-XGS-01418] c09 N71-23573
- Variable frequency nuclear magnetic resonance spectrometer providing drive signals over wide frequency range and minimizing noise effects  
[NASA-CASE-XNP-09830] c14 N71-26266
- High efficiency transformerless amplitude modulator coupled to RF power amplifier  
[NASA-CASE-GSC-10668-1] c07 N71-28430
- Technique and equipment for sputtering using apertured electrode and pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c17 N73-24569
- Radio frequency source resistance measuring instruments of varied design  
[NASA-CASE-NPO-11291-1] c14 N73-30388
- Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c32 N76-14321
- Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NPO-13479-1] c35 N77-10492
- Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c32 N80-18253
- Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NFO-14749-1] c32 N81-14186
- Pulsed phase locked loop strain monitor  
[NASA-CASE-LAR-12772-1] c33 N81-15195
- High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c33 N81-31482
- RADIO FREQUENCY DISCHARGE**  
Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c33 N79-15245
- RADIO FREQUENCY HEATING**  
Gyrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c33 N81-16384
- RADIO FREQUENCY INTERFERENCE**  
Radio frequency noise generator having microwave slow-wave structure in gas discharge plasma  
[NASA-CASE-XER-11019] c09 N71-23598
- System for interference signal nulling by polarization adjustment  
[NASA-CASE-NPO-13140-1] c32 N75-24982
- Systems and methods for determining radio frequency interference  
[NASA-CASE-GSC-12150-1] c32 N79-11265
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c32 N81-27341
- RADIO FREQUENCY SHIELDING**  
Gunn effect microwave diodes with RF shielding  
[NASA-CASE-ERC-10119] c26 N72-21701
- Process for making RF shielded cable connector assemblies and resulting structures  
[NASA-CASE-GSC-11215-1] c09 N73-28083
- RADIO INTERFEROMETERS**  
System for real-time crustal deformation monitoring  
[NASA-CASE-NFO-14124-1] c46 N80-14603
- RADIO RECEIVERS**  
Radio receiver with array of independently steerable antennas for deep space communication  
[NASA-CASE-XLA-00901] c07 N71-10775
- Development of optimum pre-detection diversity combining receiving system adapted for use with amplitude modulation, phase modulation, and frequency modulation systems  
[NASA-CASE-XGS-00740] c07 N71-23098
- Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c32 N80-18253
- Interferometric locating system  
[NASA-CASE-NPO-14173-1] c04 N80-32359
- RADIO RELAY SYSTEMS**  
Satellite radio communication system with remote

steerable antenna  
[NASA-CASE-XNP-02389] c07 N71-28900  
Systems and methods for determining radio  
frequency interference  
[NASA-CASE-GSC-12150-1] c32 N79-11265

**RADIO SIGNALS**  
Erectable, inflatable, radio signal reflecting  
passive communication satellite  
[NASA-CASE-XLA-00210] c30 N70-40309  
Synchronous detection system for detecting weak  
radio astronomical signals  
[NASA-CASE-XNP-05832] c30 N71-23723

**RADIO SOURCES (ASTRONOMY)**  
Conical scan tracking system employing a large  
antenna  
[NASA-CASE-NPO-14009-1] c32 N79-13214

**RADIO STARS**  
System generating sidereal frequency signals  
from signals of standard solar frequency  
without use of mixing operations or feedback  
loops  
[NASA-CASE-XGS-02610] c14 N71-23174

**RADIO TELEMETRY**  
Digital telemetry system apparatus to reduce  
tape recorder wow and flutter noise during  
playback  
[NASA-CASE-XGS-01812] c07 N71-23001

**RADIO TELESCOPES**  
Antenna groud replacement system  
[NASA-CASE-NPO-15205-1] c37 N81-19457

**RADIO TRANSMITTERS**  
Vehicle locating system utilizing AM  
broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c32 N75-26194  
Aircraft-mounted crash-activated transmitter  
device  
[NASA-CASE-MFS-16609-3] c03 N76-32140  
Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c04 N81-22036

**RADIO WAVES**  
Gunn effect microwave diodes with RF shielding  
[NASA-CASE-ERC-10119] c26 N72-21701

**RADIOACTIVE ISOTOPES**  
Thermally cascaded thermoelectric generator with  
radioisotopic heat source  
[NASA-CASE-NPO-10753] c03 N72-26031  
Protected isotope heat source --- for  
atmospheric reentry protection and heat  
transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c73 N75-30876

**RADIOACTIVE WASTES**  
Method and system for nuclear waste disposal ---  
control valves for encapsulating wastes  
[NASA-CASE-NPO-15454-1] c73 N82-12916

**RADIOBIOLOGY**  
Production of I-125 for use as  
radiopharmaceutical for low radiation exposure  
[NASA-CASE-LEW-10518-1] c24 N72-33681

**RADIOGRAPHY**  
Nondestructive radiographic tests of resistance  
welds  
[NASA-CASE-XNP-02568] c15 N71-18613  
Method and system for in vivo measurement of  
bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c52 N77-14737  
Low X-ray absorption aneurism clips  
[NASA-CASE-LAR-12650-1] c52 N81-29768

**RADIOLYSIS**  
Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c37 N76-18458

**RADIOMETERS**  
Miniaturized radiometer for detecting low level  
thermal radiation  
[NASA-CASE-XLA-04556] c14 N69-27484  
Black body radiometer design with temperature  
sensing and cavity heat source cone winding  
[NASA-CASE-XNP-05701] c14 N71-26475  
Black body radiometer having isothermally  
surrounded cavity for ultraviolet, visible,  
and infrared radiation  
[NASA-CASE-NPO-10810] c14 N71-27323  
Thermoelectric radiometer using polymer film  
as capacitor  
[NASA-CASE-ARC-10138-1] c14 N72-24477  
Development of radiant energy sensor to detect  
the radiant energy wavelength bands from  
portions of radiating body  
[NASA-CASE-ERC-10174] c14 N72-25409

Development of radiometric sensor to warn  
aircraft pilots of region of clear air  
turbulence along flight path  
[NASA-CASE-ERC-10081] c14 N72-28437  
Radiometric measuring system for solar activity  
and atmospheric attenuation and emission  
[NASA-CASE-ERC-10276] c14 N73-26432  
Steady state thermal radiometers  
[NASA-CASE-MFS-21108-1] c34 N74-27861  
Method and apparatus for precision control of  
radiometer  
[NASA-CASE-NFO-15398-1] c35 N81-33449

**RADIOSONDES**  
Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c52 N80-18691

**RAIN**  
Precipitation detector and mechanism for  
stopping and restarting machinery at  
initiation and cessation of rain  
[NASA-CASE-XLA-02619] c10 N71-26334

**RAMJET ENGINES**  
Telescoping-spike supersonic nozzle for turbojet  
or ramjet engines  
[NASA-CASE-XLE-00005] c28 N70-39899  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c15 N78-32168

**RAMPS (STRUCTURES)**  
Automated multi-level vehicle parking system  
[NASA-CASE-NPO-13058-1] c37 N77-22480

**RANDOM ACCESS MEMORY**  
Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-1] c60 N80-21987

**RANDOM LOADS**  
Fatigue testing device applying random discrete  
load levels to test specimen and applicable to  
aircraft structures  
[NASA-CASE-XLA-02131] c32 N70-42003

**RANDOM NOISE**  
Circuits for amplitude limiting of random noise  
inputs  
[NASA-CASE-NPO-10169] c10 N71-24844  
Digital servo control of random sound test  
excitation --- in reverberant acoustic chamber  
[NASA-CASE-NPO-11623-1] c71 N74-31148  
Random pulse generator  
[NASA-CASE-MSC-14131-1] c33 N75-19515  
Pseudo noise code and data transmission method  
and apparatus  
[NASA-CASE-GSC-12017-1] c32 N77-30308

**RANGE (EXTREMES)**  
Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c33 N78-32339

**RANGE FINDERS**  
Closed loop radio communication ranging system  
to determine distance between moving airborne  
vehicle and fixed ground station  
[NASA-CASE-XNP-01501] c21 N70-41930  
Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c32 N79-14267  
Doppler radar having phase modulation of both  
transmitted and reflected return signals ---  
range-finding  
[NASA-CASE-MSC-18675-1] c32 N81-29312

**RANGEFINDING**  
Equipment for testing of ground station ranging  
equipment and spacecraft transponders  
[NASA-CASE-XMS-05454-1] c07 N71-12391  
Spacecraft ranging system  
[NASA-CASE-NFO-10066] c09 N71-18598  
Binary coded sequential acquisition ranging  
system for distance measurements  
[NASA-CASE-NPO-11194] c08 N72-25209  
Loop transponder for regenerating code of  
mu-type ranging system  
[NASA-CASE-NPO-11707] c07 N73-25161  
Orbital and entry tracking accessory for globes  
--- to provide range requirements for reentry  
vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c19 N74-21015

**RARE EARTH COMPOUNDS**  
Including didymium hydrate in nickel hydroxide  
of positive electrode of storage batteries to  
increase ampere hour capacity  
[NASA-CASE-XGS-03505] c03 N71-10608

**RARE GASES**  
Inert gas metallic vapor laser  
[NASA-CASE-NFO-13449-1] c36 N75-32441

**RAREFIED GASES**  
Magnetically controlled plasma accelerator

capable of ignition in low density gaseous environment  
 [NASA-CASE-XLA-00327] c25 N71-29184

**RATES (PER TIME)**  
 Apparatus and digital technique for coding rate data  
 [NASA-CASE-LAR-10128-1] c08 N73-20217

**RC CIRCUITS**  
 RC transistor circuit to indicate each pulse of pulse train and occurrence of nth pulse  
 [NASA-CASE-XMF-00906] c09 N70-41655  
 Device utilizing RC rate generators for continuous slow speed measurement  
 [NASA-CASE-XMF-02966] c10 N71-24863  
 Digital data handling circuits for pulse amplifiers  
 [NASA-CASE-XNP-01068] c10 N71-26739  
 Design of active RC network capable of operating at high Q values with reduced sensitivity to gain amplification and number of passive components  
 [NASA-CASE-ARC-10042-2] c10 N72-11256  
 Active RC filter networks and amplifiers for deep space magnetic field measurement  
 [NASA-CASE-XAC-05462-2] c10 N72-17171  
 RC networks with voltage amplifier, RC input circuit, and positive feedback  
 [NASA-CASE-ARC-10020] c10 N72-17172  
 Multiloop RC active filter network with low parameter sensitivity and low amplifier gain  
 [NASA-CASE-ARC-10192] c09 N72-21245  
 Temperature control system comprised of wheatstone bridge with RC circuit  
 [NASA-CASE-NPO-11304] c14 N73-26430  
 Diode-quad bridge circuit means  
 [NASA-CASE-ARC-10364-3] c33 N75-19520

**REACTION CONTROL**  
 Development of voice operated controller for controlling reaction jets of spacecraft  
 [NASA-CASE-XLA-04063] c31 N71-33160

**REACTION KINETICS**  
 Synthesis of polyformals  
 [NASA-CASE-ARC-11244-1] c23 N82-16174

**REACTION TIME**  
 Pseudonoise code tracking loop  
 [NASA-CASE-MSC-18035-1] c32 N81-15179

**REACTION WHEELS**  
 Satellite stabilization reaction wheel scanner  
 [NASA-CASE-XGS-02629] c14 N71-21082  
 Gravity gradient attitude control system with gravity gradiometer and reaction wheels for artificial satellite attitude control  
 [NASA-CASE-GSC-10555-1] c21 N71-27324

**REACTIVITY**  
 Absorbing gas reactivity control system for minimizing power distribution and perturbation in nuclear reactors  
 [NASA-CASE-XLE-04599] c22 N72-20597

**REACTOR CORES**  
 Reactor heated in-core diodes for energy conversion  
 [NASA-CASE-NPO-10542] c09 N72-27228

**REACTOR DESIGN**  
 Non-equilibrium radiation nuclear reactor  
 [NASA-CASE-HQN-10841-1] c73 N78-19920

**REACTOR MATERIALS**  
 Zirconium modified nickel-copper alloy  
 [NASA-CASE-LEW-12245-1] c26 N77-20201

**REACTOR PHYSICS**  
 Non-equilibrium radiation nuclear reactor  
 [NASA-CASE-HQN-10841-1] c73 N78-19920

**READOUT**  
 Flow angle sensor and remote readout system for use with cryogenic fluids  
 [NASA-CASE-XLE-04503] c14 N71-24864  
 System for checking status of several double-throw switches by readout indications  
 [NASA-CASE-XLA-08799] c10 N71-27272  
 Magneto-optic detection system with noise cancellation  
 [NASA-CASE-NPO-11954-1] c35 N78-29421

**REAL TIME OPERATION**  
 Respiratory analysis system to determine gas flow rate and frequency of respiration and expiration cycles in real time  
 [NASA-CASE-MSC-13436-1] c05 N73-32015  
 Real time moving scene holographic camera system  
 [NASA-CASE-MFS-21087-1] c35 N74-17153

Real time, large volume, moving scene holographic camera system  
 [NASA-CASE-MFS-22537-1] c35 N75-27328  
 Carbon monoxide monitor --- using real time operation  
 [NASA-CASE-MFS-22060-1] c35 N75-29380  
 Real time analysis of voiced sounds  
 [NASA-CASE-NPO-13465-1] c32 N76-31372  
 Real time reflectometer --- measurement of specular reflectance  
 [NASA-CASE-MFS-23118-1] c35 N77-31465  
 Contour detector and data acquisition system for the left ventricular outline  
 [NASA-CASE-ARC-10985-1] c52 N79-10724  
 Azimuth correlator for real-time synthetic aperture radar image processing  
 [NASA-CASE-NPO-14019-1] c32 N79-14268  
 System for real-time crustal deformation monitoring  
 [NASA-CASE-NPO-14124-1] c46 N80-14603  
 X-ray position detector  
 [NASA-CASE-NPO-12087-1] c74 N81-19898  
 Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
 [NASA-CASE-NPO-14054-1] c32 N82-12297

**REBREATHING**  
 Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
 [NASA-CASE-MSC-16182-1] c54 N80-10799

**RECEIVERS**  
 Semiconductor in resonant cavity for improving signal to noise ratio of communication receiver  
 [NASA-CASE-MSC-12259-1] c07 N70-12616  
 Improved phase lock loop for receiver in multichannel telemetry system with suppressed carrier  
 [NASA-CASE-NPO-11593-1] c07 N73-28012  
 Automatic carrier acquisition system for phase locked loop receiver  
 [NASA-CASE-NPO-11628-1] c07 N73-30113  
 Coherent receiver employing nonlinear coherence detection for carrier tracking  
 [NASA-CASE-NPO-11921-1] c32 N74-30523  
 Low distortion receiver for bi-level baseband PCM waveforms  
 [NASA-CASE-MSC-14557-1] c32 N76-16249  
 Wideband heterodyne receiver for laser communication system  
 [NASA-CASE-GSC-12053-1] c32 N77-28346  
 Receiving and tracking phase modulated signals  
 [NASA-CASE-MSC-16170-2] c32 N81-16338  
 Self-calibrating threshold detector  
 [NASA-CASE-MSC-16370-1] c35 N81-19427

**RECONSTRUCTION**  
 Method and means for recording and reconstructing holograms without use of reference beam  
 [NASA-CASE-ERC-10020] c16 N71-26154

**RECORDING HEADS**  
 Electromagnetic transducer recording head having a laminated core section and tapered gap  
 [NASA-CASE-NPO-10711-1] c35 N77-21392

**RECORDING INSTRUMENTS**  
 Weighing and recording device for obtaining precise automatic record of small changes in force  
 [NASA-CASE-XLA-02605] c14 N71-10773  
 Blood pressure measuring system for separately recording dc and ac pressure signals of Korotkoff sounds  
 [NASA-CASE-XMS-06061] c05 N71-23317  
 Helical recorder for multiple channel recording  
 [NASA-CASE-GSC-10614-1] c09 N72-11224  
 Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
 [NASA-CASE-NPO-11317-2] c36 N74-13205  
 Holography utilizing surface plasmon resonances  
 [NASA-CASE-MFS-22040-1] c35 N74-26946  
 Measuring probe position recorder  
 [NASA-CASE-LAR-10806-1] c35 N74-32877

**RECOVERABILITY**  
 Ejectable underwater sound source recovery assembly  
 [NASA-CASE-LAE-10595-1] c35 N74-16135

**RECOVERABLE LAUNCH VEHICLES**  
 Techniques for recovery of multistage rocket vehicles by providing lifting surfaces on



- individual sections  
[NASA-CASE-XMF-00389] c31 N70-34176
- Orbiter/launch system  
[NASA-CASE-LAR-12250-1] c14 N81-26161
- RECOVERABLE SPACECRAFT**  
Describing assembly for opening stabilizing and decelerating flaps of flight capsules used in space research  
[NASA-CASE-XMF-03169] c31 N71-15675
- RECOVERY PARACHUTES**  
Parachute system for lowering manned spacecraft from post-reentry to ocean landing  
[NASA-CASE-XLA-00195] c02 N70-38009  
Development and operating principles of gas generator for deploying recovery parachutes from space capsules during atmospheric entry  
[NASA-CASE-LAR-10549-1] c31 N73-13898
- RECTANGULAR PANELS**  
Rectangular solar cell stacked panels to generate electrical power aboard spacecraft  
[NASA-CASE-NPO-11771] c03 N73-20040  
Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c24 N78-10214
- RECTIFIERS**  
Lithium drifted silicon radiation detector with gold rectifying contacts  
[NASA-CASE-XLE-10529] c14 N69-23191  
Power control switching circuit using low voltage semiconductor controlled rectifiers for high voltage isolation  
[NASA-CASE-XNP-02713] c10 N69-39888  
Precision full wave rectifier circuit for rectifying incoming electrical signals having positive or negative polarity with only positive output signals  
[NASA-CASE-ARC-10101-1] c09 N71-33109  
Voltage amplitude-responsive trigger circuit with silicon controlled rectifier  
[NASA-CASE-GSC-10221-1] c09 N72-23171  
Dc to ac to dc converter with transistor driven synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c09 N72-25253  
Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c33 N81-19393  
Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MPS-25208-1] c33 N81-27402
- REDOX CELLS**  
Zirconium carbide as an electrocatalyst for the chromous/chromic redox couple  
[NASA-CASE-LEW-13246-1] c25 N81-26203  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c44 N81-29524
- REDUCED GRAVITY**  
Reduced gravity liquid configuration simulator to study propellant behavior in rocket fuel tanks  
[NASA-CASE-XLE-02624] c12 N69-39988  
Apparatus for measuring human body mass in zero or reduced gravity environment  
[NASA-CASE-XMS-03371] c05 N70-42000  
Cable suspension and inclined walkway system for simulating reduced or zero gravity environments  
[NASA-CASE-XLA-01787] c11 N71-16028  
Development of restraint system for securing personnel to ergometer while exercising under weightless conditions  
[NASA-CASE-MFS-21046-1] c14 N73-27377
- REDUCTION (CHEMISTRY)**  
Producing metal powders of controlled particle size by reducing oxide using reactive metal vapor in vacuum  
[NASA-CASE-XLE-06461] c17 N72-22530  
Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c37 N76-18458  
Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c27 N80-32514
- REDUNDANCY**  
Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c60 N80-30050
- REDUNDANT COMPONENTS**  
Redundant memory for enhanced reliability of digital data processing system  
[NASA-CASE-GSC-10564] c10 N71-29135
- Redundant disc  
[NASA-CASE-LEW-12496-1] c07 N78-33101  
Redundant motor drive system  
[NASA-CASE-MPS-23777-1] c37 N80-32716  
Redundant operation of counter modules  
[NASA-CASE-NFO-14162-1] c60 N81-15706
- REELS**  
Method and apparatus for measuring web material wound on a reel  
[NASA-CASE-GSC-11902-1] c38 N77-17495
- REENTRY COMMUNICATION**  
Electrostatic modulator for communicating through plasma sheath formed around spacecraft during reentry  
[NASA-CASE-XLA-01400] c07 N70-41331  
Method and apparatus for communicating through ionized layer of gases surrounding spacecraft during reentry into planetary atmospheres  
[NASA-CASE-XLA-01127] c07 N70-41372  
Reentry communication by injection of water droplets into plasma layer surrounding space vehicle  
[NASA-CASE-XLA-01552] c07 N71-11284
- REENTRY SHIELDING**  
Transpirationally cooled heat ablation system for interplanetary spacecraft reentry shielding  
[NASA-CASE-XMS-02677] c31 N70-42075  
Method and apparatus for fabrication of heat insulating and ablative reentry structure  
[NASA-CASE-XMS-02009] c33 N71-20834  
Ablative heat shield for protection from aerodynamic heating of reentry spacecraft  
[NASA-CASE-MSC-12143-1] c33 N72-17947  
Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c73 N75-30876  
Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c24 N79-24062
- REENTRY TRAJECTORIES**  
Aerodynamic configuration of reentry vehicle heat shield to provide longitudinal and directional stability at hypersonic velocities  
[NASA-CASE-XMS-04142] c31 N70-41631
- REENTRY VEHICLES**  
Leading edge design for hypersonic reentry vehicles  
[NASA-CASE-XLA-00165] c31 N70-33242  
Delta winged, manned reentry vehicle capable of horizontal glide landing at low speeds  
[NASA-CASE-XLA-00241] c31 N70-37986  
Telespectrograph for analyzing upper atmosphere by tracking bodies reentering atmosphere at high velocities  
[NASA-CASE-XLA-03273] c14 N71-18699  
Ablation sensor for measuring surface ablation rate of material on vehicles entering earths atmosphere on entry into planetary atmospheres  
[NASA-CASE-XLA-01791] c14 N71-22991  
Design of ring wing vehicle of high drag-to-weight ratio to withstand reentry stress into low density atmosphere  
[NASA-CASE-XLA-04901] c31 N71-24315  
Development of auxiliary lifting system to provide ferry capability for entry vehicles  
[NASA-CASE-LAR-10574-1] c11 N73-13257  
Development and operating principles of gas generator for deploying recovery parachutes from space capsules during atmospheric entry  
[NASA-CASE-LAR-10549-1] c31 N73-13898  
Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c27 N76-23426
- REFERENCE SYSTEMS**  
Automatic frequency control device for providing frequency reference for voltage controlled oscillator  
[NASA-CASE-KSC-10393] c09 N72-21247  
Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c04 N77-19056
- REFINING**  
Helium refining by superfluidity  
[NASA-CASE-XNP-00733] c06 N70-34946
- REFLECTANCE**  
Optical characteristics measuring apparatus  
[NASA-CASE-XNP-08840] c23 N71-16365  
Device for determining acceleration of gravity by interferometric measurement of travel of

falling body  
[NASA-CASE-XNP-05644] c14 N71-17587

Highly stable optical mirror assembly optimizing image quality of light diffraction patterns  
[NASA-CASE-ERC-10001] c23 N71-24868

**REFLECTED WAVES**

Device and method for determining X ray reflection efficiency, scattering properties, and surface finish of optical surfaces  
[NASA-CASE-MFS-20243] c23 N73-13662

Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c36 N75-15028

Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c36 N76-31512

**REFLECTING TELESCOPES**

Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c89 N79-10969

**REFLECTION**

Vacuum preparation of zinc titanate pigment resistant to loss of reflective properties  
[NASA-CASE-MFS-13532] c18 N72-17532

Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector --- for determining density of gas  
[NASA-CASE-ARC-10631-1] c74 N76-20958

**REFLECTOMETERS**

Ellipsoidal mirror reflector for measuring reflectance  
[NASA-CASE-XGS-05291] c23 N71-16341

Real time reflectometer --- measurement of specular reflectance  
[NASA-CASE-MFS-23118-1] c35 N77-31465

Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c43 N79-25443

Visible and infrared polarization ratio spectrorreflectometer  
[NASA-CASE-LAR-12285-1] c35 N80-28687

**REFLECTORS**

Method of compactly packaging centrifugally expandable lightweight flexible reflector satellite  
[NASA-CASE-XLA-00138] c31 N70-37981

Antenna design with self erecting mesh reflector  
[NASA-CASE-XGS-09190] c31 N71-16102

Cylindrical reflector for resolving wide angle light beam from telescope into narrow beam for spectroscopic analysis  
[NASA-CASE-XGS-08269] c23 N71-26206

Conical reflector antenna with feed approximating line source  
[NASA-CASE-NPO-10303] c07 N72-22127

Target acquisition antenna feed with reflector system  
[NASA-CASE-GSC-10064-1] c10 N72-22235

Multipurpose microwave antenna, employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c07 N72-25174

Characteristics of microwave antenna with conical reflectors to generate plane wave front  
[NASA-CASE-NPO-11661] c07 N73-14130

Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c44 N78-31526

Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c71 N81-27687

**REFRACTIVITY**

The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c74 N78-13874

Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c74 N80-27185

Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c36 N81-19440

**REFRACTORY MATERIALS**

Test apparatus for determining mechanical properties of refractory materials at high temperatures in vacuum or inert atmospheres  
[NASA-CASE-XLE-00335] c14 N70-35368

Prestressed rocket nozzle with ceramic inner rings and refractory metal outer rings  
[NASA-CASE-XNP-02888] c18 N71-21068

Semiconductor device manufacture using refractory dielectrics as diffusant masks and interconnection insulating materials  
[NASA-CASE-XER-08476-1] c26 N72-17820

Electric furnace for vacuum and zero gravity melting of high melting point materials during earth orbit  
[NASA-CASE-MFS-20710] c11 N72-23215

High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c27 N78-19302

High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c27 N79-14213

Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c24 N79-24062

Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c27 N79-28307

Improved refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c26 N80-14232

Improved attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MSC-18741-1] c16 N81-16110

Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c26 N81-16209

Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c37 N81-24446

Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c25 N81-29180

Method of repairing surface damage to porous refractory substrates --- shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c27 N81-29231

Castable high temperature refractory materials  
[NASA-CASE-LEW-13080-2] c27 N82-11210

**REFRACTORY METALS**

Refractory filament series circuitry for radiant heater  
[NASA-CASE-XLE-00387] c33 N70-34812

Production of refractory bodies with controlled porosity by pressing and heating mixtures of refractory and inert metal powders  
[NASA-CASE-LEW-10393-1] c17 N71-15468

Multilayer porous refractory metal ionizer design with thick, porous, large-grain substrates and thin, porous micron-grain substrates  
[NASA-CASE-XNP-04338] c17 N71-23046

Brazing alloy adapted for brazing corrosion resistant steel to refractory metals, also for brazing refractory metals to other refractory metals  
[NASA-CASE-XNP-03063] c17 N71-23365

Development and characteristics of thermal radiation shielding of refractory metal foil used for induction furnace  
[NASA-CASE-XLE-03432] c33 N71-24145

Production of high strength refractory compounds and microconstituents into refractory metal matrix  
[NASA-CASE-XLE-03940] c18 N71-26153

Silicide coating process and composition for protection of refractory metals from oxidation  
[NASA-CASE-XLE-10910] c18 N71-29040

Development of procedure for improved distribution of refractory compounds and micro-constituents in refractory metal matrix  
[NASA-CASE-XLE-03940-2] c17 N72-28536

Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c27 N76-16229

Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c37 N76-23570

**REFRIGERATING**

Heat exchanger and decontamination system for multistage refrigeration unit  
[NASA-CASE-NPO-10634] c23 N72-25619

**REFRIGERATING MACHINERY**

Gas balancing, cryogenic refrigeration apparatus with Joule-Thomson valve assembly  
[NASA-CASE-NPO-10309] c15 N69-23190

- Method and apparatus for producing very low temperature refrigeration based on gas pressure balance  
[NASA-CASE-XNP-08877] c15 N71-23025
- Dual solid cryogenics for spacecraft refrigeration insuring low temperature cooling for extended periods  
[NASA-CASE-GSC-10188-1] c23 N71-24725
- Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c37 N76-29590
- A cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c31 N81-19344
- REFRIGERATORS**
- Intermittent type silica gel adsorption refrigerator for providing temperature control for spacecraft components  
[NASA-CASE-XNP-00920] c15 N71-15906
- Helium refrigerator  
[NASA-CASE-NPO-13435-1] c31 N76-14284
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c31 N79-17029
- Refrigerator module, system and process --- regenerative, cryogenic cooling of an infrared radiation detection system  
[NASA-CASE-ARC-11263-1] c31 N81-27328
- REGENERATION (ENGINEERING)**
- Switching circuit with regeneratively connected transistors eliminating power consumption when not in use  
[NASA-CASE-XNP-02654] c10 N70-42032
- Direct current electromotive system for regenerative braking of electric motor  
[NASA-CASE-XMF-01096] c10 N71-16030
- Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c37 N80-31790
- REGENERATION (PHYSIOLOGY)**
- An implantable electrical device  
[NASA-CASE-GSC-12560-1] c52 N80-27073
- REGENERATIVE COOLING**
- Metal ribbon wrapped outer wall for regeneratively cooled combustion chamber  
[NASA-CASE-XLE-00164] c15 N70-36411
- Fabrication method for lightweight regeneratively cooled combustion chamber of channel construction  
[NASA-CASE-XLE-00150] c28 N70-41818
- Regenerative cooling system for small rocket engine having restart capability and using noncryogenic hypergolic propellants  
[NASA-CASE-XLE-00685] c28 N70-41992
- Regenerative cooling system for rocket combustion chamber using coolant tubes in convergent-divergent nozzle  
[NASA-CASE-XLE-04857] c28 N71-23968
- Thermocouple apparatus for measuring wall temperatures in regeneratively cooled rocket engines having thin walled cooling passages  
[NASA-CASE-XLE-05230-2] c14 N73-13417
- Refrigerator module, system and process --- regenerative, cryogenic cooling of an infrared radiation detection system  
[NASA-CASE-ARC-11263-1] c31 N81-27328
- REGENERATIVE FUEL CELLS**
- Electrolytically regenerative hydrogen-oxygen fuel cells  
[NASA-CASE-XLE-04526] c03 N71-11052
- REGENERATORS**
- Loop transponder for regenerating code of mu-type ranging system  
[NASA-CASE-NPO-11707] c07 N73-25161
- REGISTERS (COMPUTERS)**
- Data processor with plural register stages for selectively interconnecting with each other to effect multiplicity of operations  
[NASA-CASE-GSC-10186] c08 N71-33110
- Priority interrupt system --- comprised of four registers  
[NASA-CASE-NPO-13067-1] c60 N76-18800
- REINFORCED PLASTICS**
- Process for developing filament reinforced plastic tubes used in research and development programs  
[NASA-CASE-LAR-10203-1] c15 N72-16330
- Reinforced structural plastics  
[NASA-CASE-LEW-10199-1] c27 N74-23125
- REINFORCEMENT (STRUCTURES)**
- Reinforcing beam system for highly flexible diaphragms in valves or pressure switches  
[NASA-CASE-XNP-01962] c32 N70-41370
- REINFORCING FIBERS**
- High strength reinforced metallic composites for applications over wide temperature range  
[NASA-CASE-XLE-02428] c17 N70-33288
- Method for producing fiber reinforced metallic composites with high strength and elasticity over wide temperature range  
[NASA-CASE-XLE-00231] c17 N70-38198
- Description of method for producing metallic composites reinforced with ceramic and refractory hard metals that are fibered in place  
[NASA-CASE-XLE-03925] c18 N71-22894
- Production and application of sprayable fiber reinforced ablation material  
[NASA-CASE-XLA-04251] c18 N71-26100
- Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MPS-21077-1] c24 N75-28135
- Fuselage structure using advanced technology metal matrix fiber reinforced composites  
[NASA-CASE-LAB-11688-1] c05 N78-18045
- Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAB-12099-1] c27 N80-16158
- Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c27 N81-19296
- Resin composition, process for producing the same, product produced therefrom and process for producing said product  
[NASA-CASE-ARC-11331-1] c27 N81-31363
- RELAXATION OSCILLATORS**
- Voltage controlled, variable frequency relaxation oscillator with MOSFET variable current feed  
[NASA-CASE-GSC-10022-1] c10 N71-25882
- RELAY SATELLITES**
- Earth satellite relay station for frequency multiplexed voice transmission  
[NASA-CASE-GSC-10118-1] c07 N71-24621
- Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c32 N80-20448
- RELEASING**
- Bolt-latch mechanism for releasing despin weights from space vehicle  
[NASA-CASE-XLA-00679] c15 N70-38601
- Quick-release coupling for fueling rocket vehicles with cryogenic propellants  
[NASA-CASE-XKS-01985] c15 N71-10782
- Design and development of release mechanism for spacecraft components, releasable despin weights, and extensible gravity booms  
[NASA-CASE-XGS-08718] c15 N71-24600
- Pneumatic mechanism for releasing hook and loop fasteners between large rigid structures  
[NASA-CASE-XMS-10660-1] c15 N71-25975
- Delayed simultaneous appendage release mechanism for use on spacecraft equipped with despin mechanisms and releasable components  
[NASA-CASE-GSC-10814-1] c03 N73-20039
- RELIABILITY ANALYSIS**
- Development of computer program for estimating reliability of self-repair and fault-tolerant systems with respect to selected system and mission parameters  
[NASA-CASE-NPO-13086-1] c15 N73-12495
- RELIABILITY ENGINEERING**
- Improving load capacity and fatigue life of rolling element systems in rockets and missiles  
[NASA-CASE-XLE-02999] c15 N71-16052
- Gage for quality control of sealing surfaces of threaded boss  
[NASA-CASE-XMF-04966] c14 N71-17658
- Reliability of automatic refilling valving device for cryogenic liquid systems  
[NASA-CASE-NPO-11177] c15 N72-17453
- Reliability of electrical connectors after heat sterilization  
[NASA-CASE-NPO-10694] c09 N72-20200
- Reliable electrical element heater using plural wire system and backup power sources  
[NASA-CASE-MPS-21462-1] c33 N74-14935
- Hollow rolling element bearings  
[NASA-CASE-LEW-11087-3] c37 N74-21064
- RELIEF VALVES**
- Relief valve to permit slow and fast bleeding

- rates at difference pressure levels  
[NASA-CASE-XMS-05894-1] c15 N69-21924
- Describing apparatus for separating gas from  
cryogenic liquid under zero gravity and for  
venting gas from fuel tank  
[NASA-CASE-XLE-00586] c15 N71-15968
- Redundant hydraulic control system for actuators  
with three main valve combination  
[NASA-CASE-MFS-20944] c15 N73-13466
- Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c52 N81-25660
- Ion beam sputter-etched ventricular catheter for  
hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c52 N81-27786
- REMOTE CONTROL**
- Oscillatory electromagnetic mirror drive system  
for horizon scanners  
[NASA-CASE-XLA-03724] c14 N69-27461
- Stage separation using remote control release of  
joint with explosive insert  
[NASA-CASE-XLA-02854] c15 N69-27490
- Power controlled bimetallic electromechanical  
actuator for accurate, timely, and reliable  
response to remote control signal  
[NASA-CASE-XNP-09776] c09 N69-39929
- Two component valve assembly for cryogenic  
liquid transfer regulation  
[NASA-CASE-XLE-00397] c15 N70-36492
- Remotely actuated quick disconnect mechanism for  
umbilical cables  
[NASA-CASE-XLA-00711] c03 N71-12258
- Remotely actuated quick disconnect for tubular  
umbilical conduits used to transfer fluids  
from ground to rocket vehicle  
[NASA-CASE-XLA-01396] c03 N71-12259
- Remote control device operated by movement of  
finger tips for manual control of spacecraft  
attitude  
[NASA-CASE-XAC-02405] c09 N71-16089
- Satellite radio communication system with remote  
steerable antenna  
[NASA-CASE-XNP-02389] c07 N71-28900
- Laser beam projector for continuous, precise  
alignment between target, laser generator, and  
astronomical telescope during tracking  
[NASA-CASE-NPO-11087] c23 N71-29125
- Solid state remote circuit selector switching  
circuit  
[NASA-CASE-LEW-10387] c09 N72-22201
- Design and development of multichannel laser  
remote control system using modulated  
helium-neon laser as transmitter and light  
collector as receiving antenna  
[NASA-CASE-LAR-10311-1] c16 N73-16536
- Cooperative multi-axis sensor for teleoperation  
of article manipulating apparatus  
[NASA-CASE-NPO-13386-1] c54 N75-27758
- Remotely operable articulated manipulator  
[NASA-CASE-MFS-22707-1] c37 N76-15457
- Remote manipulator system  
[NASA-CASE-MFS-22022-1] c37 N76-15460
- Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315
- Simulator method and apparatus for practicing  
the mating of an observer-controlled object  
with a target  
[NASA-CASE-MFS-23052-2] c74 N79-13855
- Terminal guidance sensor system  
[NASA-CASE-NPO-14521-1] c54 N79-20746
- Tactile sensing system --- manipulator controllers  
[NASA-CASE-NPO-15094-1] c33 N81-16386
- Terminal guidance sensor system --- space  
shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c37 N81-27519
- REMOTE HANDLING**
- Manipulator for remote handling in zero gravity  
environment  
[NASA-CASE-MFS-14405] c15 N72-28495
- Apparatus for remote handling of materials ---  
mixing or analyzing dangerous chemicals  
[NASA-CASE-LAR-10634-1] c37 N74-18123
- Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c54 N77-32721
- Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c37 N79-28551
- Apparatus for sequentially transporting containers  
[NASA-CASE-MFS-23846] c37 N80-29704
- REMOTE MANIPULATOR SYSTEM**
- Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c37 N80-14398
- REMOTE SENSORS**
- Passive optical wind and turbulence remote  
detection system  
[NASA-CASE-XHF-14032] c20 N71-16340
- Ionization control system design for monitoring  
separately located ion gage pressures on  
vacuum chambers  
[NASA-CASE-XLE-00787] c14 N71-21090
- Flow angle sensor and remote readout system for  
use with cryogenic fluids  
[NASA-CASE-XLE-04503] c14 N71-24864
- Time synchronization system for synchronizing  
clocks at remote locations with master clock  
using moon reflected coded signals  
[NASA-CASE-NPO-10143] c10 N71-26326
- Development of radiometric sensor to warn  
aircraft pilots of region of clear air  
turbulence along flight path  
[NASA-CASE-ERC-10081] c14 N72-28437
- Development of electronic detection system for  
remotely determining number and movement of  
enemy personnel  
[NASA-CASE-ABC-10097-2] c07 N73-25160
- Microwave power transmission system wherein  
level of transmitted power is controlled by  
reflections from receiver  
[NASA-CASE-MFS-21470-1] c44 N74-19870
- Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c33 N75-19521
- Wind sensor  
[NASA-CASE-NPO-13462-1] c35 N76-24524
- Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493
- Wind measurement system  
[NASA-CASE-MFS-23362-1] c47 N77-10753
- Penetrometer --- for determining load bearing  
characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c35 N77-27367
- Remote sensing of vegetation and soil using  
microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c43 N78-10529
- Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c35 N78-27384
- Radar target for remotely sensing hydrological  
phenomena  
[NASA-CASE-LAR-12344-1] c43 N80-18498
- Photoelectric detection system  
[NASA-CASE-MFS-23776-1] c74 N80-25134
- REMOTELY PILOTED VEHICLES**
- Rotating launch device for a remotely piloted  
aircraft  
[NASA-CASE-ARC-10979-1] c09 N77-19076
- REMOVAL**
- Catalyst bed element removing tool  
[NASA-CASE-XFR-00811] c15 N70-36901
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c28 N81-15119
- REPEATERS**
- Time division relay synchronizer with master  
sync pulse for activating binary counter to  
produce signal identifying time slot for station  
[NASA-CASE-GSC-10373-1] c07 N71-19773
- REPLACING**
- Indexing mechanism for cathode array  
substitution in electron beam tube  
[NASA-CASE-NPO-10625] c09 N71-26182
- RESCUE OPERATIONS**
- Backpack carrier with retractable legs suitable  
for lunar exploration and convertible to  
rescue vehicle  
[NASA-CASE-LAR-10056] c05 N71-12351
- Development and characteristics of rescue litter  
with inflatable flotation device for water  
rescue application  
[NASA-CASE-XMS-04170] c05 N71-22748
- Method of locating persons in distress --- by  
using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c32 N77-21267
- RESEARCH AND DEVELOPMENT**
- Process for developing filament reinforced  
plastic tubes used in research and development  
programs  
[NASA-CASE-LAR-10203-1] c15 N72-16330
- RESEARCH VEHICLES**
- Lunar landing flight research vehicle  
[NASA-CASE-XFR-00929] c31 N70-34966
- Velocity limiting safety system for motor driven  
research vehicle

- [NASA-CASE-XLA-07473] c15 N71-24895
- RESIDUAL STRESS**
- Miniature solid state, direction sensitive, stress transducer design with bonded semiconductive piezoresistive element for sensing residual stresses [NASA-CASE-XNP-02983] c14 N71-21091
- Manufacturing process for making perspiration resistant-stress resistant biopotential electrode [NASA-CASE-MSC-90153-2] c05 N72-25120
- RESILIENCE**
- Automated ball rebound resilience test equipment for determining viscoelastic properties of polymers [NASA-CASE-XLA-08254] c14 N71-26161
- RESIN BONDING**
- Procedure for bonding polytetrafluoroethylene thermal protective sleeves to magnesium alloy conical shell components with different thermal coefficients [NASA-CASE-XLA-01262] c15 N71-21404
- Covered silicon solar cells and method of manufacture --- with polymeric films [NASA-CASE-LPW-11065-2] c44 N76-14600
- Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy [NASA-CASE-MFS-23674-1] c24 N81-29163
- RESIN MATRIX COMPOSITES**
- Phosphorus-containing bisimide resins [NASA-CASE-ARC-11321-1] c27 N81-27272
- RESINS**
- Modification of polyurethanes with alkyl halide resins, inorganic salts, and encapsulated volatile and reactive halogen for fuel fire control [NASA-CASE-ARC-10098-1] c06 N71-24739
- Development of process for bonding resinous body in cavities of honeycomb structures [NASA-CASE-MSC-12357] c15 N73-12489
- Resin for protecting p-n semiconductor junction surface [NASA-CASE-ERC-10339-1] c18 N73-30532
- Composite lamination method [NASA-CASE-LAR-12019-1] c24 N78-17150
- Resin composition, process for producing the same, product produced therefrom and process for producing said product [NASA-CASE-ARC-11331-1] c27 N81-31363
- Phosphorus-containing imide resins [NASA-CASE-ARC-11368-1] c27 N81-31364
- RESISTANCE**
- Manufacturing process for making perspiration resistant-stress resistant biopotential electrode [NASA-CASE-MSC-90153-2] c05 N72-25120
- Variable resistance constant tension and lubrication device --- using oil-saturated leather wiper [NASA-CASE-KSC-10723-1] c37 N75-13265
- RESISTANCE HEATING**
- High resistance cross flow heat exchangers for electrothermal rocket engines [NASA-CASE-XLE-01783] c28 N70-34175
- RESISTORS**
- High isolation RF signal selection switches [NASA-CASE-NFO-13081-1] c33 N74-22814
- Resistive anode image converter [NASA-CASE-HQN-10876-1] c33 N76-27473
- RESOLUTION**
- Conversion system for increasing resolution of analog to digital converters [NASA-CASE-XAC-00404] c08 N70-40125
- Cylindrical reflector for resolving wide angle light beam from telescope into narrow beam for spectroscopic analysis [NASA-CASE-XGS-08269] c23 N71-26206
- Resolution enhanced sound detecting apparatus [NASA-CASE-NPO-14134-1] c71 N79-23753
- RESOLVERS**
- Differential phase shift keyed signal resolver [NASA-CASE-MSC-14066-1] c33 N74-27705
- Focal axis resolver for offset reflector antennas [NASA-CASE-GSC-12630-1] c32 N82-10287
- RESONANCE**
- Optically selective, acoustically resonant gas detecting transducer [NASA-CASE-ARC-10639-1] c35 N78-13400
- Resonant isolator for maser amplifier [NASA-CASE-NPO-15201-1] c36 N81-24426
- RESONANT FREQUENCIES**
- Vibrating element electrometer producing high conversion gain by input current control of elements resonant frequency displacement amplitude [NASA-CASE-XAC-02807] c09 N71-23021
- Quantitative liquid measurements in container by resonant frequencies [NASA-CASE-XNP-02500] c18 N71-27397
- Development of electrical circuit for suppressing oscillations across inductor operating in resonant mode [NASA-CASE-ERC-10403-1] c10 N73-26228
- CW ultrasonic bolt tensioning monitor [NASA-CASE-LAR-12016-1] c39 N78-15512
- Microbalance --- for measuring particle mass [NASA-CASE-MSC-11242] c35 N78-17358
- Method and apparatus for shaping and enhancing acoustical levitation forces [NASA-CASE-MFS-25050-1] c71 N81-15767
- RESONATORS**
- Selective bandpass resonators using bandstop resonator pairs for microwave frequency operation [NASA-CASE-GSC-10990-1] c09 N73-26195
- RESPIRATION**
- Respiration analyzing method and apparatus for determining subjects oxygen consumption in aerospace environments [NASA-CASE-XFE-08403] c05 N71-11202
- RESPIRATORS**
- Transducer for monitoring oxygen flow in respirator [NASA-CASE-FRC-10012] c14 N72-17329
- RESPIRATORY RATE**
- Flowmeters for sensing low fluid flow rate and pressure for application to respiration rate studies [NASA-CASE-FRC-10022] c12 N71-26546
- Respiratory analysis system to determine gas flow rate and frequency of respiration and expiration cycles in real time [NASA-CASE-MSC-13436-1] c05 N73-32015
- Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings [NASA-CASE-MFS-21415-1] c52 N74-20728
- RESPIROMETERS**
- Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings [NASA-CASE-MFS-21415-1] c52 N74-20728
- RESPONSES**
- System for monitoring condition responsive devices by using frequency division multiplex technique [NASA-CASE-KSC-10521] c07 N73-20176
- RESTARTABLE ROCKET ENGINES**
- Collapsible auxiliary tank for restarting liquid propellant rocket motors under zero gravity [NASA-CASE-XNP-01390] c28 N70-41275
- Regenerative cooling system for small rocket engine having restart capability and using noncryogenic hypergolic propellants [NASA-CASE-XLE-00685] c28 N70-41992
- RESUSCITATION**
- Pulmonary resuscitation method and apparatus with adjustable pressure regulator [NASA-CASE-XMS-01115] c05 N70-39922
- RETAINING**
- Floating nut retention system [NASA-CASE-MSC-16938-1] c37 N80-23653
- Modified spiral wound retaining ring [NASA-CASE-LAR-12361-1] c37 N81-12422
- RETARDING**
- Ablative resins used for retarding regression in ablative material [NASA-CASE-XLE-05913] c33 N71-14032
- RETICLES**
- Optical tracker with pair of PM reticles having patterns 90 deg out of phase [NASA-CASE-XGS-05715] c23 N71-16100
- Method for producing reticles for use in outer space [NASA-CASE-GSC-11188-2] c21 N73-19630
- Production method of star tracking reticles for transmitting in visible and near ultraviolet regions [NASA-CASE-GSC-11188-1] c14 N73-32320

- Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c74 N74-20008
- Star scanner --- with a reticle with a pair of  
slits having differing separation  
[NASA-CASE-GSC-11569-1] c89 N74-30886
- RETRACTABLE EQUIPMENT**
- Retractable runway lights  
[NASA-CASE-XLA-00119] c11 N70-33329
- Support for flexible conductor cable between  
drawers or racks holding electronic equipment  
and cabinet assembly housing drawers or racks  
[NASA-CASE-XMF-07587] c15 N71-18701
- Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c37 N79-22474
- Antenna deployment mechanism for use with a  
spacecraft --- extensible and retractable  
telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c18 N80-14183
- Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c18 N81-24164
- RETROFIRING**
- Visual target luminaires for retrofire attitude  
control  
[NASA-CASE-XMS-12158-1] c31 N69-27499
- Device for use in descending spacecraft as  
altitude sensor for actuating deceleration  
retro-rockets  
[NASA-CASE-XMS-03792] c14 N70-41812
- RETROREFLECTION**
- Servo system for retroreflector of Michelson  
interferometer  
[NASA-CASE-NPO-10300] c14 N71-17662
- Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c35 N78-18395
- Method and apparatus for Doppler frequency  
modulation of radiation  
[NASA-CASE-NPO-14524-1] c32 N80-24510
- RETROREFLECTORS**
- Interferometer --- high resolution  
[NASA-CASE-NPO-14448-1] c74 N81-29963
- RETROCKET ENGINES**
- Steerable solid propellant rocket motor adapted  
to effect payload orientation as multistage  
rocket stage or reduce velocity as retrorocket  
[NASA-CASE-XNP-00234] c28 N70-38645
- REUSABLE HEAT SHIELDING**
- High temperature glass thermal control structure  
and coating  
[NASA-CASE-ARC-11164-1] c27 N82-10228
- REUSABLE SPACECRAFT**
- Recoverable, reusable single stage booster  
capable of injecting large payloads into  
circular earth orbit  
[NASA-CASE-XNP-01973] c31 N70-41588
- Spacecraft configurations and aerodynamic  
characteristics of space shuttle systems with  
two reusable stages  
[NASA-CASE-MSC-12433] c31 N73-14854
- REUSE**
- Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c27 N76-22376
- REVERSE OSMOSIS**
- Reverse osmosis membrane of high urea rejection  
properties --- water purification  
[NASA-CASE-ARC-10980-1] c27 N80-23452
- REVERSED FLOW**
- Multistage multiple reentry axial flow reaction  
turbine with reverse flow reentry ducting  
[NASA-CASE-XLE-00170] c15 N70-36412
- Reversible current directing circuitry for  
reversible motor control  
[NASA-CASE-XLA-09371] c10 N71-18724
- Positive locking check valve for stopping  
reversed flow  
[NASA-CASE-XMS-09310] c15 N71-22706
- Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c07 N77-17C59
- REYNOLDS NUMBER**
- Wind tunnel test section for simulating high  
Reynolds number over transonic speed range  
[NASA-CASE-MFS-20509] c11 N72-17183
- REYNOLDS STRESS**
- System for measuring Reynolds in a turbulently  
flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c34 N76-27517
- RHENIUM**
- Thermocouples of tantalum and rhenium alloys for  
more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c35 N77-32454
- RHEOMETERS**
- Viscosity measuring instrument  
[NASA-CASE-NFO-14501-1] c35 N80-18357
- RIBBONS**
- Metal ribbon wrapped outer wall for  
regeneratively cooled combustion chamber  
[NASA-CASE-XLF-00164] c15 N70-36411
- Device for bending metal ribbon or wire  
[NASA-CASE-XLA-05966] c15 N72-12408
- Controlled diffusion reaction process for  
masking substrate of twisted multifilament  
superconductive ribbon  
[NASA-CASE-LEW-11726-1] c26 N73-26752
- Method of controlling defect orientation in  
silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c76 N79-11920
- Solar array strip and a method for forming the  
same  
[NASA-CASE-NPO-13652-1] c44 N79-17314
- Growth of silicon carbide crystals on a seed  
while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c76 N79-23798
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 N79-24431
- Method for forming a solar array strip  
[NASA-CASE-NFO-13652-3] c44 N80-14474
- Means for growing ribbon crystals without  
subjecting the crystals to thermal  
shock-induced strains  
[NASA-CASE-NPO-14298-1] c76 N80-32244
- Method of growing a ribbon crystal particularly  
suited for facilitating automated control of  
ribbon width  
[NASA-CASE-NPO-14295-1] c76 N80-32245
- Apparatus for use in the production of  
ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NFC-14297-1] c33 N81-19389
- RIBOFLAVIN**
- Bioassay of flavin coenzymes  
[NASA-CASE-GSC-10565-1] c06 N72-25149
- RIBS (SUPPORTS)**
- Aeroflexible wing structure with air scoop for  
inflating stiffeners with ram air  
[NASA-CASE-XLA-06095] c01 N69-39981
- RICE**
- Rice preparation process consisting of cooking,  
two freezing-thawing cycles, and then freeze  
drying  
[NASA-CASE-MSC-13540-1] c05 N72-33096
- RIDING QUALITY**
- Ride quality meter  
[NASA-CASE-LAR-12882-1] c54 N81-31848
- RIGID ROTORS**
- Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c05 N77-17029
- RIGID STRUCTURES**
- Pneumatic mechanism for releasing hook and loop  
fasteners between large rigid structures  
[NASA-CASE-XMS-10660-1] c15 N71-25975
- Storage stable, thermally activated foaming  
compositions for erecting and rigidizing  
mechanisms of thin sheet solar collectors  
[NASA-CASE-LAR-10373-1] c18 N71-26155
- Adjustable rigid mount for trihedral mirror  
formed of alloy with small coefficient of  
thermal expansion supporting screws and  
spring-biased plates  
[NASA-CASE-XNP-08907] c23 N71-29123
- Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c18 N75-27040
- Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c31 N81-27324
- RIGID WINGS**
- Deployment system for flexible wing with rigid  
superstructure  
[NASA-CASE-XLA-01220] c02 N70-41863
- RIMS**
- Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c18 N81-29152
- RING CURRENTS**
- Design of transistorized ring counter circuit  
with special steering and triggering circuits  
[NASA-CASE-XGS-03095] c09 N69-27463
- RING STRUCTURES**
- Reversible ring counter using cascaded single  
silicon controlled rectifier stages  
[NASA-CASE-XGS-01473] c09 N71-10673
- Nonreusable energy absorbing device comprising  
ring member with plurality of recesses,

- cutting members, and guide member mounted in each recess  
[NASA-CASE-XMP-10040] c15 N71-22877
- Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c33 N75-13139
- Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c36 N75-19653
- Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c54 N78-17678
- Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c32 N80-29539
- Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c37 N81-12422
- Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c33 N81-24348
- RING WINGS**
- Design of ring wing vehicle of high drag-to-weight ratio to withstand reentry stress into low density atmosphere  
[NASA-CASE-XLA-04901] c31 N71-24315
- RIPPLES**
- Circuit for monitoring power supply by ripple current indication  
[NASA-CASE-KSC-10162] c09 N72-11225
- RIVETS**
- Electrical connection for printed circuits on common board, using bellows principle in rivet  
[NASA-CASE-XNP-05082] c15 N70-41960
- ROCKET ENGINE CASES**
- Method for shaping regeneratively cooled rocket motor casing having minimum thickness at each channel cross section  
[NASA-CASE-XLE-00409] c28 N71-15658
- Regeneratively cooled rocket motor casing with tapered channels to insure minimum thicknesses at each channel cross section for necessary strength requirements  
[NASA-CASE-XLE-05689] c28 N71-15659
- Payload/spent rocket engine case separation system  
[NASA-CASE-XLA-05369] c31 N71-15687
- Liner for hybrid solid propellants to bind propellant to rocket motor case  
[NASA-CASE-XNP-05744] c27 N71-16392
- Permanently magnetized ion engine casing construction for use in spacecraft propulsion systems  
[NASA-CASE-XNP-06942] c28 N71-23293
- Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c28 N77-10213
- Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-1349] c20 N77-17143
- ROCKET ENGINE CONTROL**
- Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMF-05964-1] c20 N79-21124
- ROCKET ENGINE DESIGN**
- High thrust annular liquid propellant rocket engine and exhaust nozzle design  
[NASA-CASE-XLE-00078] c28 N70-33284
- Spherical solid propellant rocket engine design  
[NASA-CASE-XLA-00105] c28 N70-33331
- Spherical solid propellant rocket engine having abrupt burnout  
[NASA-CASE-XHQ-01897] c28 N70-35381
- Metal ion rocket engine design  
[NASA-CASE-XLE-00342] c28 N70-37980
- Improvement in rocket engine performance with swirling flow exhaust nozzle development  
[NASA-CASE-XNP-03692] c28 N71-24321
- Characteristics of ion rocket engine with combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c28 N73-24783
- Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c20 N74-13502
- Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c20 N76-14191
- System for imposing directional stability on a rocket-propelled vehicle  
[NASA-CASE-MFS-21311-1] c20 N76-21275
- ROCKET ENGINES**
- Channel-type shell construction for rocket engines and related configurations  
[NASA-CASE-XLE-00144] c28 N70-34860
- Encapsulated heater forming hollow body for cathode used in ion thruster  
[NASA-CASE-LEW-10814-1] c28 N70-35422
- Apparatus for cooling and injecting hypergolic propellants into combustion chamber of small rocket engine  
[NASA-CASE-XLE-00303] c15 N70-36535
- Elastic universal joint for rocket motor mounting  
[NASA-CASE-XNP-00416] c15 N70-36947
- Water electrolysis rocket engine with self-regulating stoichiometric fuel mixing regulator  
[NASA-CASE-XGS-08729] c28 N71-14044
- Method for igniting solid propellant rocket motors by injecting hypergolic fluids  
[NASA-CASE-XLE-01988] c27 N71-15634
- Laminar flow of liquid coolants in rocket engines  
[NASA-CASE-NFO-10122] c12 N71-17631
- Improvement in rocket engine performance with swirling flow exhaust nozzle development  
[NASA-CASE-XNP-03692] c28 N71-24321
- System for removing and repairing spacecraft control thrusters by use of portable air locks  
[NASA-CASE-MFS-20325] c28 N71-27095
- Device for back purging thrust engines  
[NASA-CASE-XMS-04826] c28 N71-28849
- Development of method for cooling high temperature wall members with cooling medium having high heat absorption capability  
[NASA-CASE-HQN-00938] c33 N71-29053
- Automatic shunting of ion thruster magnetic field when thruster is not operating  
[NASA-CASE-LEW-10835-1] c28 N72-22771
- Vacuum chamber with scale model of rocket engine base area of space vehicle  
[NASA-CASE-MFS-20620] c11 N72-27262
- Thermocouple apparatus for measuring wall temperatures in regeneratively cooled rocket engines having thin walled cooling passages  
[NASA-CASE-XLE-05230-2] c14 N73-13417
- Improving performance of magnetoplasmadynamic arc rocket engine  
[NASA-CASE-LEW-11180-1] c25 N73-25760
- Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c20 N74-32919
- Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c20 N76-22296
- Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c20 N77-10148
- Anode for ion thruster  
[NASA-CASE-LEW-12048-1] c20 N77-20162
- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c12 N79-26075
- ROCKET EXHAUST**
- Thrust vector control by secondary injection of fluid into rocket nozzle flow field to separate exhaust flow  
[NASA-CASE-XLE-00208] c28 N70-34294
- Development of vortex fluid amplifier for throttling rocket exhaust  
[NASA-CASE-LEW-10374-1] c28 N73-13773
- ROCKET FIRING**
- Design and characteristics of linkage to alleviate rocket vehicle divergence during launch  
[NASA-CASE-XLA-00256] c31 N71-15663
- ROCKET FLIGHT**
- Development of technique for control of free flight rocket vehicles  
[NASA-CASE-XLA-00937] c31 N71-17691
- ROCKET LAUNCHING**
- Design and characteristics of linkage to alleviate rocket vehicle divergence during launch  
[NASA-CASE-XLA-00256] c31 N71-15663
- Controlled release device for use in launching rockets or missiles  
[NASA-CASE-XKS-03338] c15 N71-24043
- ROCKET LININGS**
- Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c34 N80-24573
- ROCKET NOZZLES**
- Gimbaled partially submerged nozzle for solid propellant rocket engines for providing directional control  
[NASA-CASE-XMF-01544] c28 N70-34162
- Large area-ratio nozzles for rocket motor thrust chambers  
[NASA-CASE-XLE-00145] c28 N70-36806
- Flexible rocket motor nozzle closure device to aid ignition and protect rocket chamber from foreign objects

- [NASA-CASE-XLA-02651] c28 N70-41967  
Automatically deploying nozzle exit cone extension  
[NASA-CASE-XLF-01640] c31 N71-15637  
Method for testing rocket nozzles at high  
tensile stress levels  
[NASA-CASE-NFO-10311] c31 N71-15643  
Development of collapsible nozzle extension for  
rocket engines  
[NASA-CASE-MFS-11497] c28 N71-16224  
Camera protecting device for use in  
photographing rocket engine nozzles or other  
engine components  
[NASA-CASE-NFO-10174] c14 N71-18465  
Multislot film cooled pyrolytic graphite rocket  
nozzle  
[NASA-CASE-XNP-04389] c28 N71-20942  
Prestressed rocket nozzle with ceramic inner  
rings and refractory metal outer rings  
[NASA-CASE-XNP-02888] c18 N71-21068  
Improvement in rocket engine performance with  
swirling flow exhaust nozzle development  
[NASA-CASE-XNP-03692] c28 N71-24321  
Development of method for cooling high  
temperature wall members with cooling medium  
having high heat adsorption capability  
[NASA-CASE-BQN-00938] c33 N71-29053  
Inflatable rocket engine nozzle skirt with  
transpiration cooling  
[NASA-CASE-MFS-20619] c28 N72-11708  
Thin walled nozzle with insulative nonablative  
coating for solid propellant rocket engines  
[NASA-CASE-NPO-11458] c28 N72-23810  
Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c20 N79-21123  
Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c37 N79-22474
- ROCKET OXIDIZERS**  
Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c28 N74-33209
- ROCKET PROPELLANTS**  
Solenoid two-step valve for bipropellant flow  
rate control to rocket engine  
[NASA-CASE-XMS-04890-1] c15 N70-22192  
Rocket engine injector orifice to accommodate  
changes in density, velocity, and pressure,  
thereby maintaining constant mass flow rate of  
propellant into rocket combustion chamber  
[NASA-CASE-XLE-03157] c28 N71-24736  
Bipropellant injector with pair of concave  
deflector plates  
[NASA-CASE-XNP-09461] c28 N72-23809
- ROCKET TEST FACILITIES**  
High-vacuum condenser tank for testing ion  
rocket engines  
[NASA-CASE-XLE-00168] c11 N70-33278  
Micro-pound extended range thrust stand for  
small rocket engines  
[NASA-CASE-GSC-10710-1] c28 N71-27094
- ROCKET THRUST**  
Solid propellant rocket vehicle thrust control  
method and apparatus  
[NASA-CASE-XNP-00217] c28 N70-38181  
High voltage insulators for direct current in  
acceleration system of electrostatic thruster  
[NASA-CASE-XLE-01902] c28 N71-10574  
Characteristics of solid propellant rocket  
engine with controlled rate of thrust buildup  
operating in vacuum environment  
[NASA-CASE-NPO-11559] c28 N73-24784  
Thrust measurement  
[NASA-CASE-XMS-05731] c35 N75-29382
- ROCKET VEHICLES**  
Umbilical separator for rockets  
[NASA-CASE-XNP-00425] c11 N70-38202  
Hydraulic support equipment for full scale  
dynamic testing of large rocket vehicle under  
free flight conditions  
[NASA-CASE-XMF-01772] c11 N70-41677  
Design and characteristics of linkage to  
alleviate rocket vehicle divergence during  
launch  
[NASA-CASE-XLA-00256] c31 N71-15663  
Development of technique for control of free  
flight rocket vehicles  
[NASA-CASE-XLA-00937] c31 N71-17691  
Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c37 N80-14398
- ROCKET-BORNE INSTRUMENTS**  
Rocket-borne aspect sensor consisting of  
radiation sensor, apertured disk, commutator,  
and counting circuits  
[NASA-CASE-XGS-08266] c14 N69-27432
- ROCKETS**  
Device for detecting hydrogen fires onboard high  
altitude rockets  
[NASA-CASE-MFS-13130] c10 N72-17173
- ROCKS**  
Rotary impact-type rock drill for recovering  
rock cuttings  
[NASA-CASE-XNP-07478] c14 N69-21923  
Rock sampling --- apparatus for controlling  
particle size  
[NASA-CASE-XNP-10007-1] c46 N74-23068  
Rock sampling --- method for controlling  
particle size distribution  
[NASA-CASE-XNP-09755] c46 N74-23069  
Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c43 N79-31706
- RODS**  
Nuclear thermionic converter ---  
tungsten-thorium oxide rods  
[NASA-CASE-NFO-13121-1] c73 N77-18891
- ROLL**  
Measuring roll alignment of test body with  
respect to reference body  
[NASA-CASE-GSC-10514-1] c14 N72-20379
- ROLLER BEARINGS**  
Solid lubricant applied to porous roller  
bearings prior to use in ultrahigh vacuum  
[NASA-CASE-XLF-09527] c15 N71-17688  
Semilinear bearing comprising two rows of roller  
bearings separated by spherical bearings and  
permitting rotational and translational movement  
[NASA-CASE-XLA-02809] c15 N71-22982  
Low mass rolling element bearing assembly  
[NASA-CASE-LEW-11087-1] c15 N73-30458  
Method of making rolling element bearings  
[NASA-CASE-LEW-11087-2] c37 N74-15128  
Bearing material --- composite material with low  
friction surface for rolling or sliding contact  
[NASA-CASE-LEW-11930-1] c24 N76-22309
- ROLLERS**  
Improving load capacity and fatigue life of  
rolling element systems in rockets and missiles  
[NASA-CASE-XLF-02999] c15 N71-16052  
Load regulating latch  
[NASA-CASE-MSC-19535-1] c37 N77-32499
- ROLLING CONTACT LOADS**  
Development of rolling element bearing for  
operation in ultrahigh vacuum environment  
[NASA-CASE-XLF-09527-2] c15 N71-26189
- ROLLING MOMENTS**  
Star sensor system for roll attitude control of  
spacecraft  
[NASA-CASE-XNP-01307] c21 N70-41856
- ROOM TEMPERATURE**  
Process permitting application of synthetic  
resin coating to irregular-shaped objects at  
ambient temperature  
[NASA-CASE-XNP-06508] c18 N69-39895
- ROTARY STABILITY**  
Drive mechanism for operating reactance attitude  
control system for aerospace bodies  
[NASA-CASE-XMF-01598] c21 N71-15583  
Combination guide and rotary bearing for freely  
moving shaft  
[NASA-CASE-XLA-00013] c15 N71-29136  
Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c37 N75-30562  
Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c37 N77-19458  
Apparatus for and method of compensating dynamic  
unbalance  
[NASA-CASE-GSC-12550-1] c37 N81-22358
- ROTARY WING AIRCRAFT**  
Aircraft control system for rotary wing aircraft  
[NASA-CASE-ERC-10439] c02 N73-19004
- ROTARY WINGS**  
Variable geometry rotor system for direct  
control over wake vortex  
[NASA-CASE-LAR-10557] c02 N72-11018  
Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c05 N77-17029  
Locking redundant link  
[NASA-CASE-LAR-11900-1] c37 N79-14382  
Helicopter rotor airfoil  
[NASA-CASE-LAR-12396-1] c02 N79-24958



Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c05 N80-14107  
Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c05 N81-19C67

**ROTATING BODIES**  
Optical scanner mounted on rotating support structure with method of compensating for image or satellite rotation  
[NASA-CASE-XGS-02401] c14 N69-27485  
Laser device for removing material from rotating object for dynamic balancing  
[NASA-CASE-MFS-11279] c16 N71-20400  
Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c33 N75-13139  
Annular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c15 N76-14158  
Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c37 N76-18459  
Multiple in-line docking capability for rotating space stations  
[NASA-CASE-MFS-20855-1] c15 N77-10112  
Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c37 N79-10422  
Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c71 N79-20827  
Rotary target V-block --- aligning wind tunnel apparatus for optical measurement  
[NASA-CASE-LAR-12007-2] c74 N79-25876  
Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c74 N79-34011  
Rhomboid prism pair for rotating the plane of parallel light beams --- laser velocimeters  
[NASA-CASE-ARC-11311-1] c74 N81-16882  
Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c37 N81-22358

**ROTATING CYLINDERS**  
Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c51 N78-27733  
Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c37 N81-33482

**ROTATING DISKS**  
Foil seal between parts moving relative to each other  
[NASA-CASE-XLE-05130] c15 N69-21362  
Rocket-borne aspect sensor consisting of radiation sensor, apertured disk, commutator, and counting circuits  
[NASA-CASE-XGS-06266] c14 N69-27432  
Redundant disc  
[NASA-CASE-LEW-12496-1] c07 N78-33101

**ROTATING ELECTRICAL MACHINES**  
Modulating and controlling intensity of light beam from high temperature source by servocontrolled rotating cylinders  
[NASA-CASE-XMS-04300] c09 N71-19479  
Design and development of electric motor with stationary field and armature windings which operates on direct current  
[NASA-CASE-XGS-05290] c09 N71-25999  
Double-induction variable speed system for constant-frequency electrical power generation  
[NASA-CASE-ERC-10665] c09 N71-27364

**ROTATING ENVIRONMENTS**  
Radial module manned space station with artificial gravity environment  
[NASA-CASE-XMS-01906] c31 N70-41373  
Artificial gravity system for simulating self-locomotion capability of astronauts in rotating environments  
[NASA-CASE-XLA-03127] c11 N71-10776

**ROTATING GENERATORS**  
Rotating raster generator  
[NASA-CASE-FRC-10071-1] c32 N74-20813  
Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c44 N80-21828  
Wingtip vortex turbine  
[NASA-CASE-LAR-12544-1] c07 N81-27096

**ROTATING MIRRORS**  
Optical retrodirective modulator with focus spoiling reflector driven by modulation signal  
[NASA-CASE-GSC-10062] c14 N71-15605

Attitude sensor with scanning mirrors for detecting orientation of space vehicle with respect to planet  
[NASA-CASE-XLA-00793] c21 N71-22880  
Optical device containing rotatable prism and reflecting mirror for generating precise angles  
[NASA-CASE-XGS-04173] c19 N71-26674  
Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c74 N74-21304

**ROTATING SHAFTS**  
Fluid seal formed by flexible disk on rotating shaft to retain lubricating oils around shaft  
[NASA-CASE-XLE-05130-2] c15 N71-19570  
Anemometer with braking mechanism to prevent rotation of wind driven elements  
[NASA-CASE-XMF-05224] c14 N71-23726  
Electromagnetic braking arrangement for controlling rotor rotation in electric motor  
[NASA-CASE-XNF-06936] c15 N71-24695  
Liquid-vapor interface seal design for turbine rotating shafts including helical and molecular pumps and liquid cooling of mercury vapor  
[NASA-CASE-XNP-02862-1] c15 N71-26294  
Combination guide and rotary bearing for freely moving shaft  
[NASA-CASE-XLA-00013] c15 N71-29136  
Development of Hall effect transducer for converting mechanical shaft rotations into proportional electrical signals  
[NASA-CASE-LAR-10620-1] c09 N72-25255  
Spiral groove seal --- for rotating shaft  
[NASA-CASE-XLE-10326-4] c37 N74-15125  
Digital servo controller --- for rotating antenna shaft  
[NASA-CASE-KSC-10769-1] c33 N74-29556  
Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c44 N74-33379  
Ergometer calibrator --- for any ergometer utilizing rotating shaft  
[NASA-CASE-MFS-21045-1] c35 N75-15932  
Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c37 N76-22541  
Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c37 N77-19458  
Tachometer  
[NASA-CASE-MFS-23175-1] c35 N77-30436  
Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c37 N78-27425  
Rotary electric device  
[NASA-CASE-GSC-12138-1] c33 N79-20314  
Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c37 N80-28711  
Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c37 N81-22360

**ROTATION**  
Senilinear bearing comprising two rows of roller bearings separated by spherical bearings and permitting rotational and translational movement  
[NASA-CASE-XLA-02809] c15 N71-22982  
Mechanical actuator wherein linear motion changes to rotational motion  
[NASA-CASE-XGS-04548] c15 N71-24045  
Positioning mechanism for converting translatory motion into rotary motion  
[NASA-CASE-NPO-10679] c15 N72-21462  
Systems for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c71 N82-11861

**ROTOR AERODYNAMICS**  
Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c05 N80-14107

**ROTOR BLADES**  
Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c35 N78-24515  
Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c07 N79-10057

**ROTOR BLADES (TURBOMACHINERY)**  
Locking device for retaining turbine rotor blades on turbine wheel  
[NASA-CASE-XNP-00816] c28 N71-28928  
Blade vibration damping pins for turbomachinery  
[NASA-CASE-XLE-00155] c28 N71-29154  
Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c37 N74-11300

Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c07 N74-28226

Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c07 N77-27116

Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c07 N77-32148

Helicopter rotor airfoil  
[NASA-CASE-LAR-12396-1] c02 N79-24958

**ROTOR LIFT**  
Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c05 N79-17847

**ROTOR SPEED**  
Brushless dc tachometer design with Hall effect crystals and output voltage magnitude proportional to rotor speed  
[NASA-CASE-MFS-20385] c09 N71-24904

Improved method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-1] c37 N80-26660

**ROTORCRAFT AIRCRAFT**  
Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c05 N79-17847

**ROTORS**  
Multistage, multiple reentry, single rotor, axial flow turbine  
[NASA-CASE-XLE-00085] c28 N70-39895

Describing angular position and velocity sensing apparatus  
[NASA-CASE-XGS-05680] c14 N71-17585

Microwave waveguide switch with rotor position control  
[NASA-CASE-XNP-06507] c09 N71-23548

Electromagnetic braking arrangement for controlling rotor rotation in electric motor  
[NASA-CASE-XNP-06936] c15 N71-24695

Rotary vane attenuator with two stators and intermediary rotor, using resistive and orthogonally disposed cards  
[NASA-CASE-NPO-11418-1] c14 N73-13420

Process for welding compressor and turbine blades to rotors and discs of jet engines  
[NASA-CASE-LEW-10533-1] c15 N73-28515

Magnetic field control --- electromechanical torquing devices  
[NASA-CASE-MFS-23828-1] c33 N80-17359

**RUBBER**  
Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c27 N78-33228

Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c44 N79-17313

Enhancement of in vitro Guayule propagation  
[NASA-CASE-NPO-15213-1] c51 N81-29728

**RUBBER COATINGS**  
Intumescent paint containing nitrile rubber for fire protection  
[NASA-CASE-ARC-10196-1] c18 N73-13562

**RUBY**  
Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c37 N75-15992

Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c24 N79-25143

**RUBY LASERS**  
Cooling and radiation protection of ruby lasers using copper sulfate solution in alcohol  
[NASA-CASE-MFS-20180] c16 N72-12440

Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c35 N81-27459

**RUNWAY ALIGNMENT**  
Magnetic method for detection of aircraft position relative to runway  
[NASA-CASE-ARC-10179-1] c21 N72-22619

**RUNWAY LIGHTS**  
Retractable runway lights  
[NASA-CASE-XLA-00119] c11 N70-33329

Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c04 N82-16059

**RUPTURING**  
Knife structure for controlling rupture of shock tube diaphragms  
[NASA-CASE-XAC-00731] c11 N71-15960

## HYDBERG SERIES

A low energy electron magnetometer  
[NASA-CASE-LAR-12706-1] c35 N81-19428

## S

## SABOT PROJECTILES

Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c09 N79-21084

## SAFETY DEVICES

Helmet and torso tiedown mechanism for shortening pressure suits upon inflation  
[NASA-CASE-XMS-00784] c05 N71-12335

Positive locking check valve for stopping reversed flow  
[NASA-CASE-XMS-09310] c15 N71-22706

Description of protective device for providing safe operating conditions around work piece in machine or metal working tool  
[NASA-CASE-XLE-01092] c15 N71-22797

Velocity limiting safety system for motor driven research vehicle  
[NASA-CASE-XLA-07473] c15 N71-24895

Device for generating and controlling combustion products for testing of fire detection system  
[NASA-CASE-GSC-11095-1] c14 N72-10375

Restraint torso for increased mobility and reduced physiological effects while wearing pressurized suits  
[NASA-CASE-MSC-12397-1] c05 N72-25119

Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c37 N74-21057

Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c08 N74-30421

Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c05 N75-25915

Fifth wheel  
[NASA-CASE-FRC-10081-1] c37 N77-14477

Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c33 N80-18287

Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c31 N81-19343

## SAFETY FACTORS

Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10888-1] c44 N79-14527

## SAHA EQUATIONS

Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c35 N76-15431

## SALT BATHS

Application techniques for protecting materials during salt bath brazing  
[NASA-CASE-XLE-00046] c15 N70-33311

## SAMARIUM

Gadolinium or samarium doped-silicon semiconductor material with resistance to radiation damage for use in solar cells  
[NASA-CASE-XLE-10715] c26 N71-23292

## SAMPLERS

Portable vacuum probe surface sampler for sampling large surface areas with relatively light loading densities of microorganisms  
[NASA-CASE-LAR-10623-1] c14 N73-30395

Method and device for destructive detection of a substance --- useful in determining the concentration of carbon fibers or pollutant particles  
[NASA-CASE-NPO-14940-1] c35 N80-21723

Mobile sampler for use in acquiring samples of terrestrial atmospheric gasses  
[NASA-CASE-NPO-15220-1] c35 N81-24414

Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c35 N81-29407

## SAMPLES

Plural output optometric sample cell and analysis system  
[NASA-CASE-NFO-10233-1] c74 N78-33913

## SAMPLING

Impact bit for cutting, collecting, and storing samples such as lunar rock cuttings  
[NASA-CASE-XNP-01412] c15 N70-42034

Design and development of fluid sample collector  
[NASA-CASE-XMS-06767-1] c14 N71-20435

- Design and development of two types of atmosphere sampling chambers  
[NASA-CASE-NFO-11373] c13 N72-25323
- Digital to analog converter for sampled signal reconstruction  
[NASA-CASE-MSC-12458-1] c08 N73-32081
- Rock sampling --- apparatus for controlling particle size  
[NASA-CASE-XNP-10007-1] c46 N74-23068
- Rock sampling --- method for controlling particle size distribution  
[NASA-CASE-XNP-09755] c46 N74-23069
- Apparatus for microbiological sampling --- including automatic swabbing  
[NASA-CASE-LAR-11069-1] c35 N75-12272
- Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c54 N76-14804
- Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c35 N78-27384
- CCD correlated quadruple sampling processor  
[NASA-CASE-NFO-14426-1] c33 N79-17134
- Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c34 N79-24285
- Method and apparatus for detecting coliform organisms  
[NASA-CASE-ABC-11322-1] c51 N82-12739
- SANDWICH STRUCTURES**
- Sandwich panel structure for removing heat from shield between hot and cold areas  
[NASA-CASE-XLA-00349] c33 N70-37979
- Particle detector for measuring micrometeoroid velocity in space  
[NASA-CASE-XLA-00495] c14 N70-41332
- Capacitor sandwich structure containing metal sheets of known thickness for counting penetration rates of meteoroids  
[NASA-CASE-XLE-01246] c14 N71-10797
- Technique for making foldable, inflatable, plastic honeycomb core panels for use in building and bridge structures, light and radio wave reflectors, and spacecraft  
[NASA-CASE-XLA-03492] c15 N71-22713
- Punch and die device for forming convolution series in thin gase metal hemispheres  
[NASA-CASE-XNP-05297] c15 N71-23811
- Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c24 N78-10214
- Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ABC-11040-1] c24 N79-16915
- Multilayer thermal protection system  
[NASA-CASE-LAR-12620-1] c24 N80-12117
- SAPPHIRE**
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c37 N75-15992
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c24 N79-25143
- SATELLITE ANTENNAS**
- Monopole antenna system for maximum omnidirectional efficiency for use on satellites  
[NASA-CASE-XLA-00414] c07 N70-38200
- Development of antenna system for spin stabilized communication satellite for simultaneous reception and transmission of data  
[NASA-CASE-XGS-02607] c31 N71-23009
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c32 N81-27341
- SATELLITE ATTITUDE CONTROL**
- Photosensitive light source device for detecting unmanned spacecraft deviation from reference attitude  
[NASA-CASE-XNP-00438] c21 N70-35089
- Attitude control system for spacecraft based on conversion of incident solar radiation on movable control surfaces into mechanical torques  
[NASA-CASE-XNP-02982] c31 N70-41855
- Design and development of satellite despersion device  
[NASA-CASE-XNP-08523] c31 N71-20396
- Utilization of momentum devices for forming attitude control and damping system for spacecraft  
[NASA-CASE-XLA-02551] c21 N71-21708
- Gravity gradient attitude control system with gravity gradiometer and reaction wheels for artificial satellite attitude control  
[NASA-CASE-GSC-10555-1] c21 N71-27324
- Method and apparatus for providing active attitude control for spacecraft by converting any attitude motion of vehicle into simple rotational motion.  
[NASA-CASE-HQN-10439] c21 N72-21624
- Momentum wheel design for spacecraft attitude control and magnetic drum and head system for data storage  
[NASA-CASE-NFO-11481] c21 N73-13644
- Combination automatic-starting electrical plasma torch and gas shutoff valve --- for satellite attitude control  
[NASA-CASE-XLF-10717] c37 N75-29426
- Attitude control system  
[NASA-CASE-MFS-22787-1] c15 N77-10113
- Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c18 N81-29152
- SATELLITE CONTROL**
- Stabilization system for gravity-oriented satellites using single damper rod  
[NASA-CASE-XAC-01591] c31 N71-17729
- SATELLITE DESIGN**
- Inflation system for balloon type satellites  
[NASA-CASE-XGS-03351] c31 N71-16081
- SATELLITE INSTRUMENTS**
- Satellite stabilization reaction wheel scanner  
[NASA-CASE-XGS-02629] c14 N71-21082
- SATELLITE NETWORKS**
- Satellite network synchronization system with multiple access to multiplex repeater  
[NASA-CASE-GSC-10390-1] c07 N72-11149
- SATELLITE ORBITS**
- Development of method and apparatus for spinning satellite about selected axis after reaching predetermined orientation  
[NASA-CASE-HQN-00936] c31 N71-29050
- SATELLITE ORIENTATION**
- Sensing method and device for determining orientation of space vehicle or satellite by using particle traps  
[NASA-CASE-XGS-00466] c21 N70-34297
- Spin phase synchronization of cartwheel satellite in polar orbit  
[NASA-CASE-XGS-05579] c31 N71-15676
- Development of method and apparatus for spinning satellite about selected axis after reaching predetermined orientation  
[NASA-CASE-HQN-00936] c31 N71-29050
- Analog spatial maneuver computer with three output angles for obtaining desired spatial attitude  
[NASA-CASE-GSC-10880-1] c08 N72-11172
- SATELLITE PERTURBATION**
- Flexible turnstile antenna system for reducing nutation in spin-oriented satellites  
[NASA-CASE-XMF-00442] c31 N71-10747
- SATELLITE POWER TRANSMISSION (TO EARTH)**
- Microwave power transmission beam safety system  
[NASA-CASE-NFO-14224-1] c33 N80-18287
- SATELLITE ROTATION**
- Optical scanner mounted on rotating support structure with method of compensating for image or satellite rotation  
[NASA-CASE-XGS-02401] c14 N69-27485
- Stretch Yo-Yo mechanism for reducing initial spin rate of space vehicle  
[NASA-CASE-XGS-00619] c30 N70-40016
- Development of method and apparatus for spinning satellite about selected axis after reaching predetermined orientation  
[NASA-CASE-HQN-00936] c31 N71-29050
- SATELLITE SOLAR POWER STATIONS**
- Solar power satellite system  
[NASA-CASE-HQN-10949-1] c44 N81-16530
- SATELLITE TELEVISION**
- Adaptive signal generating system and logic circuits for satellite television systems  
[NASA-CASE-GSC-11367] c10 N71-26374
- SATELLITE TRACKING**
- Design and development of tracking receiver for tracking satellites and receiving radio signal transmissions under adverse noise conditions  
[NASA-CASE-XGS-08679] c10 N71-21473
- Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NFO-13292-1] c32 N75-15854

- Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c33 N76-27472
- SATELLITE TRANSMISSION**  
Asynchronous, multiplexing, single line  
transmission and recovery data system --- for  
satellite use  
[NASA-CASE-NPO-13121-1] c32 N75-26195
- SATELLITE-BORNE PHOTOGRAPHY**  
Rotary solenoid shutter drive assembly and  
rotary inertia damper and stop plate assembly  
--- for use with cameras mounted in satellites  
[NASA-CASE-GSC-11560-1] c33 N74-20861  
Scanner --- photography from a spin stabilized  
synchronous satellite  
[NASA-CASE-GSC-12032-2] c43 N82-13465
- SATURATION**  
Saturable magnetic core and signal detection for  
indicating impending saturation  
[NASA-CASE-ERC-10089] c23 N72-17747
- SAWTOOTH WAVEFORMS**  
Linear sawtooth voltage wave generator with  
transistor timing circuit having capacitor and  
zener diode feedback loops  
[NASA-CASE-XMS-01315] c09 N70-41675
- SCANNERS**  
Electronic and mechanical scanning control  
system for monopulse tracking antenna  
[NASA-CASE-XGS-05582] c07 N69-27460  
Electronic background suppression field scanning  
sensor for detecting point source targets  
[NASA-CASE-XGS-05211] c07 N69-39980  
Electron beam scanning system for improved image  
definition and reduced power requirements for  
video signal transmission  
[NASA-CASE-ERC-10552] c09 N71-12539  
Satellite stabilization reaction wheel scanner  
[NASA-CASE-XGS-02629] c14 N71-21082  
Monopulse scanning network for scanning  
volumetric antenna pattern  
[NASA-CASE-GSC-10299-1] c09 N71-24804  
Scan oscilloscope for mapping surface  
sensitivity of photomultiplier tube  
[NASA-CASE-LAR-10320-1] c09 N72-23172  
Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c35 N74-10415  
Apparatus for scanning the surface of a  
cylindrical body  
[NASA-CASE-NPO-11861-1] c36 N74-20009  
Fast scan control for deflection type mass  
spectrometers  
[NASA-CASE-LAR-11428-1] c35 N74-34857  
Electronically scanned pressure sensor module  
with in SITU calibration capability  
[NASA-CASE-LAR-12230-1] c35 N79-14347  
Scannable beam forming interferometer antenna  
array system  
[NASA-CASE-GSC-12365-1] c32 N80-28578  
Intrusion detection method and apparatus ---  
monitoring unwanted subterranean entry and  
departure  
[NASA-CASE-ARC-11317-1] c35 N81-19430  
Programmable scan/read circuitry for charge  
coupled device imaging detectors --- for a  
startracker  
[NASA-CASE-NPO-15345-1] c33 N81-27403  
Scanner --- photography from a spin stabilized  
synchronous satellite  
[NASA-CASE-GSC-12032-2] c43 N82-13465
- SCANNING**  
Conversion system for transforming slow scan  
rate of Apollo TV camera on moon to fast scan  
of commercial TV  
[NASA-CASE-XMS-07168] c07 N71-11300  
Operation of vidicon tube for scanning spatial  
charge density pattern  
[NASA-CASE-XNP-06028] c09 N71-23189  
Position determination systems --- using orbital  
antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c17 N76-21250  
Magnetometer with a miniature transducer and  
automatic scanning  
[NASA-CASE-LAR-11617-2] c35 N78-32397  
System and method for character recognition  
[NASA-CASE-NPO-11337-1] c74 N81-19896
- SCATTERING CROSS SECTIONS**  
Method and means for helium/hydrogen ratio  
measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c25 N80-20334
- SCHLIEREN PHOTOGRAPHY**  
System and method for obtaining wide screen  
Schlieren photographs  
[NASA-CASE-NPO-14174-1] c74 N79-20856
- SCHMIDT CAMERAS**  
Cooled echelle grating spectrometer --- for  
space telescope applications  
[NASA-CASE-NPO-14372-1] c35 N80-26635
- SCHOOLS**  
Silent alarm system for multiple room facility or  
school  
[NASA-CASE-NPO-11307-1] c10 N73-30205
- SCHOTTKY DIODES**  
High voltage, high current Schottky barrier  
solar cell  
[NASA-CASE-NPO-13482-1] c44 N78-13526  
Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c44 N79-11467  
Back wall solar cell  
[NASA-CASE-LEW-12236-2] c44 N79-14528  
Schottky barrier cell and method of fabricating it  
[NASA-CASE-NPO-13689-4] c44 N81-26553  
Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c44 N81-29525
- SCOOPS**  
Aeroflexible wing structure with air scoop for  
inflating stiffeners with ram air  
[NASA-CASE-XLA-06095] c01 N69-39981
- SCORING**  
Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c37 N82-11469
- SCRAMBLING (COMMUNICATION)**  
Secure communication system  
[NASA-CASE-MSC-16462-1] c32 N78-25274
- SCREWS**  
Electromechanical control actuator system using  
double differential screws  
[NASA-CASE-ERC-10022] c15 N71-26635  
Adjustable support device with jacket screw for  
altering distance between base and supported  
member  
[NASA-CASE-NPO-10721] c15 N72-27484
- SCRUBBERS**  
Developing high pressure gas purification and  
filtration system for use in test operations  
of space vehicles  
[NASA-CASE-MFS-12806] c14 N71-17588
- SEA ICE**  
Laser technique for breaking ice in ship path  
[NASA-CASE-LAR-10815-1] c16 N72-22520
- SEA STATES**  
Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c48 N80-18667
- SEALERS**  
Design and development of flexible joint for  
pressure suits  
[NASA-CASE-XMS-09636] c05 N71-12344  
Epoxy resin sealing device for electrochemical  
cells in high vacuum environments  
[NASA-CASE-XGS-02630] c03 N71-22974  
Leak resistant bonded elastomeric seal for  
secondary electrochemical cells  
[NASA-CASE-XGS-02631] c03 N71-23006  
Self lubricating fluoride-metal composite  
materials for outer space applications  
[NASA-CASE-XLE-08511] c18 N71-23710  
Polyimides of ether-linked aryl tetracarboxylic  
dianhydrides  
[NASA-CASE-MFS-22355-1] c23 N76-15268
- SEALING**  
Poil seal between parts moving relative to each  
other  
[NASA-CASE-XLE-05130] c15 N69-21362  
Sealed electric storage battery with gas  
manifold interconnecting each cell  
[NASA-CASE-XNP-03378] c03 N71-11051  
Epoxy resin sealing device for electrochemical  
cells in high vacuum environments  
[NASA-CASE-XGS-02630] c03 N71-22974  
Electrode sealing and insulation for fuel cells  
containing caustic liquid electrolytes using  
powdered plastic and metal  
[NASA-CASE-XMS-01625] c15 N71-23022  
Sealing evacuation port and evacuating vacuum  
container such as space jackets  
[NASA-CASE-XMF-03290] c15 N71-23256  
Segmented sealing surface in valve seat  
[NASA-CASE-NPC-10606] c15 N72-25451

## SEALS (STOPPERS)

Spacecraft battery seals  
[NASA-CASE-XGS-03864] c15 N69-24320

Flexible inflatable seal for butterfly valves  
[NASA-CASE-XLE-00101] c15 N70-33376

Shrink-fit vacuum system gas valve  
[NASA-CASE-XGS-00587] c15 N70-35087

Thin walled pressure test vessel using  
low-melting alloy-filled joint to attach shell  
to heads  
[NASA-CASE-XLE-04677] c15 N71-10577

Fluid seal formed by flexible disk on rotating  
shaft to retain lubricating oils around shaft  
[NASA-CASE-XLE-05130-2] c15 N71-19570

Sealed storage container for channel carriers  
with mounted miniature electronic components  
[NASA-CASE-MFS-20075] c09 N71-26133

Liquid-vapor interface seal design for turbine  
rotating shafts including helical and  
molecular pumps and liquid cooling of mercury  
vapor  
[NASA-CASE-XNP-02862-1] c15 N71-26294

Spiral groove seal --- for rotating shaft  
[NASA-CASE-XLE-10326-4] c37 N74-15125

Glass-to-metal seals comprising relatively high  
expansion metals  
[NASA-CASE-LEW-10698-1] c37 N74-21063

High speed, self-acting shaft seal --- for use  
in turbine engines  
[NASA-CASE-LEW-11274-1] c37 N75-21631

Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c37 N77-23482

Counter pumping debris excluder and separator  
--- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c07 N78-25090

Composite seal for turbomachinery --- backings  
for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c37 N79-18318

Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c37 N79-22474

Shaft seal assembly for high speed and high  
pressure applications  
[NASA-CASE-LEW-11873-1] c37 N79-22475

Fluid pressure balanced seal  
[NASA-CASE-XGS-01286-1] c37 N79-33469

Gas path seal  
[NASA-CASE-NPO-12131-3] c37 N80-18400

Fully plasma-sprayed compliant backed ceramic  
turbine seal  
[NASA-CASE-LEW-13268-1] c37 N80-24619

Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c37 N80-26658

Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c37 N80-28711

Thermal barrier pressure seal --- shielding  
junctions between spacecraft control surfaces  
and structures  
[NASA-CASE-MSC-16134-1] c37 N81-15363

Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12589-1] c37 N82-12442

**SEAMS (JOINTS)**

Sealing apparatus for joining two pieces of  
frangible materials  
[NASA-CASE-XLA-01494] c15 N71-24164

Cord restraint system for pressure suit joints  
[NASA-CASE-XMS-05635] c05 N71-24623

Method of making pressure tight seal for super  
alloy  
[NASA-CASE-LAR-10170-1] c37 N74-11301

**SEAT BELTS**

Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c05 N75-25915

**SEATS**

Seat cushion to provide realistic acceleration  
cues to aircraft simulator pilot  
[NASA-CASE-LAR-12149-2] c09 N79-31228

**SECTORS**

Journal Bearings  
[NASA-CASE-LEW-11076-2] c37 N74-32921

**SECURITY**

Secure communication system  
[NASA-CASE-MSC-16462-1] c32 N78-25274

Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c33 N80-23559

Intrusion detection method and apparatus ---  
monitoring unwanted subterranean entry and  
departure  
[NASA-CASE-ARC-11317-1] c35 N81-19430

Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c33 N81-25299

**SEGMENTS**

Fabrication of curved reflector segments for  
solar mirror  
[NASA-CASE-XLE-08917] c15 N71-15597

**SEISMIC WAVES**

Determining sway of buildings by low frequency  
device using pendulum  
[NASA-CASE-XMF-00479] c14 N70-34794

Seismic vibration source  
[NASA-CASE-NPO-14112-1] c46 N79-22679

Underwater seismic source --- for petroleum  
exploration  
[NASA-CASE-NPO-14255-1] c46 N79-23555

**SEISMOGRAPHS**

Intrusion detection method and apparatus ---  
monitoring unwanted subterranean entry and  
departure  
[NASA-CASE-ARC-11317-1] c35 N81-19430

**SELECTORS**

Selector mechanism for mechanical separation and  
discrimination of high velocity molecular  
particles  
[NASA-CASE-XLE-01533] c11 N71-10777

Peak polarity selector for monitoring waveforms  
[NASA-CASE-FRC-10010] c10 N71-24862

**SELF ALIGNMENT**

Electro-optical system for maintaining two-axis  
alignment during milling operations on large  
tank-sections  
[NASA-CASE-XMF-00908] c14 N70-40238

**SELF ERECTING DEVICES**

Self-erectable space structures of flexible foam  
for application in planetary orbits  
[NASA-CASE-XLA-00686] c31 N70-34135

Manned space station collapsible for launching  
and self-erectable in orbit  
[NASA-CASE-XLA-00678] c31 N70-34296

Manned space station launched in packaged  
condition and self erecting in orbit  
[NASA-CASE-XLA-00258] c31 N70-38676

Foldable conduit capable of springing back as  
self erecting structural member  
[NASA-CASE-XLE-00620] c32 N70-41579

Antenna design with self erecting mesh reflector  
[NASA-CASE-XGS-09190] c31 N71-16102

Self erecting parabolic reflector design for use  
in space  
[NASA-CASE-XMS-03454] c09 N71-20658

**SELF FOCUSING**

Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c32 N82-10287

**SELF LUBRICATING MATERIALS**

Self lubricating fluoride-metal composite  
materials for outer space applications  
[NASA-CASE-XLE-08511] c18 N71-23710

Self lubricating gears and other mechanical  
parts having surface adapted to frictional  
contact  
[NASA-CASE-MFS-14971] c15 N71-24984

Method of making bearing material  
[NASA-CASE-LEW-11930-3] c24 N80-33482

**SELF LUBRICATION**

Method of making bearing materials ---  
self-lubricating, oxidation resistant  
composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c24 N79-17916

**SELF MANEUVERING UNITS**

Hand-held maneuvering unit for propulsion and  
attitude control of astronauts in zero or  
reduced gravity environment  
[NASA-CASE-XMS-05304] c05 N71-12336

Lightweight propulsion unit for movement of  
personnel and equipment across lunar surface  
[NASA-CASE-MFS-20130] c28 N71-27585

**SELF PROPAGATION**

Self-generating optical frequency waveguide  
[NASA-CASE-HCN-10541-1] c07 N71-26291

**SELF SEALING**

Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c54 N74-14845

Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c37 N81-24442

**SEMICONDUCTOR DEVICES**

Fixture for simultaneously supporting several  
components for electrical testing  
[NASA-CASE-XNP-06032] c09 N69-21926

- Semiconductor p-n junction on needle apex to provide stress and strain sensor  
[NASA-CASE-XLA-04980] c09 N69-27422
- Selective gold diffusion on monolithic silicon chips for switching and nonswitching amplifier devices and circuits and linear and digital logic circuits  
[NASA-CASE-ERC-10072] c09 N70-11148
- Extra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit  
[NASA-CASE-XGS-00381] c09 N70-34819
- Method of forming thin window drifted silicon charged particle detector  
[NASA-CASE-XLE-00808] c24 N71-10560
- Doping silicon material with gadolinium to increase radiation resistance of solar cells  
[NASA-CASE-XLE-02792] c26 N71-10607
- Separation of semiconductor wafer into chips bounded by scribe lines  
[NASA-CASE-ERC-10138] c26 N71-14354
- Voltage tunable Gunn effect semiconductor for microwave generation  
[NASA-CASE-XER-07894] c09 N71-18721
- Indicator device for monitoring charge of wet cell battery, using semiconductor light emitter and photodetector  
[NASA-CASE-NPO-10194] c03 N71-20407
- Signaling summary alarm circuit with semiconductor switch for faulty contact indications  
[NASA-CASE-XLE-03061-1] c10 N71-24798
- Method for temperature compensating semiconductor gages by exposure to high energy radiation  
[NASA-CASE-XLA-04555-1] c14 N71-25892
- Development and characteristics of fluid oscillator analog to digital converter with variable frequency controlled by signal passing through conditioning circuit  
[NASA-CASE-LEW-10345-1] c10 N71-25899
- Volume displacement transducer for leak detection in hermetically sealed semiconductor devices  
[NASA-CASE-ERC-10033] c14 N71-26672
- Inverter drive circuit for semiconductor switch  
[NASA-CASE-LEW-10233] c10 N71-27126
- Test chambers with orifice and helium mass spectrometer for detecting leak rate of encapsulated semiconductor devices  
[NASA-CASE-ERC-10150] c14 N71-28992
- Semiconductor device manufacture using refractory dielectrics as diffusant masks and interconnection insulating materials  
[NASA-CASE-XER-08476-1] c26 N72-17820
- Single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c09 N72-22199
- Development of process for forming insulating layer between two electrical conductor or semiconductor materials  
[NASA-CASE-LEW-10489-1] c15 N72-25447
- Multiterminal Gunn-type semiconductor microwave generator for producing stable signals  
[NASA-CASE-XER-07895] c26 N72-25679
- Miniature piezjunction semiconductor transducer with in situ stress coupling  
[NASA-CASE-ERC-10087-2] c14 N72-31446
- Development and characteristics of hermetically sealed coaxial package for containing microwave semiconductor components  
[NASA-CASE-GSC-10791-1] c15 N73-14469
- Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c76 N76-25049
- Semiconductor projectile impact detector  
[NASA-CASE-MFS-23008-1] c35 N78-18390
- Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c76 N78-24950
- Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c33 N80-32650
- Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c33 N81-22280
- Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c44 N81-27598
- SEMICONDUCTOR JUNCTIONS**
- Gallium arsenide solar cell preparation by surface deposition of cuprous iodide on thin n-type polycrystalline layers and heating in iodine vapor  
[NASA-CASE-XNP-01960] c09 N71-23027
- Miniature electromechanical junction transducer operating on piezjunction effect and utilizing epoxy for stress coupling component  
[NASA-CASE-ERC-10087] c14 N71-27334
- Resin for protecting p-n semiconductor junction surface  
[NASA-CASE-ERC-10339-1] c18 N73-30532
- JFET oscillator  
[NASA-CASE-GSC-12555-1] c33 N80-26601
- High voltage planar multijunction --- solar cells  
[NASA-CASE-LEW-13400-1] c44 N81-16528
- Schottky barrier cell and method of fabricating it  
[NASA-CASE-NPO-13689-4] c44 N81-26553
- SEMICONDUCTORS (MATERIALS)**
- Hole mobility of deposited semiconductor films in vacuum utilizing thermal gradient  
[NASA-CASE-XKS-04614] c15 N69-21460
- Semiconductor in resonant cavity for improving signal to noise ratio of communication receiver  
[NASA-CASE-MSC-12259-1] c07 N70-12616
- Improved semiconductor multivibrator circuit which approaches 100 percent efficiency  
[NASA-CASE-XAC-00942] c10 N71-16042
- Fabrication of sintered impurity semiconductor brushes for electrical energy transfer  
[NASA-CASE-XMF-01016] c26 N71-17818
- Binding layer of semiconductor particles by electrodeposition  
[NASA-CASE-XNP-01959] c26 N71-23043
- Gadolinium or samarium doped-silicon semiconductor material with resistance to radiation damage for use in solar cells  
[NASA-CASE-XLE-10715] c26 N71-23292
- Characteristics of infrared photodetectors manufactured from semiconductor material irradiated by electron beam  
[NASA-CASE-LAB-10728-1] c14 N73-12445
- Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c33 N75-27251
- Vapor deposition apparatus --- semiconductors and gallium arsenides  
[NASA-CASE-HQN-10462] c25 N75-29192
- Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c44 N79-11468
- Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLF-02545-1] c76 N79-21910
- Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c33 N80-18286
- SENSITIVITY**
- Design of active RC network capable of operating at high Q values with reduced sensitivity to gain amplification and number of passive components  
[NASA-CASE-ARC-10042-2] c10 N72-11256
- SENSITOMETRY**
- Condition sensor system and method  
[NASA-CASE-MSC-14805-1] c54 N78-32720
- SENSORS**
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c24 N75-30260
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14180-1] c52 N76-14757
- SENSORY PERCEPTION**
- Prosthetic limb with tactile sensing device  
[NASA-CASE-MFS-16570-1] c05 N73-32013
- SEPARATED FLOW**
- Thrust vector control by secondary injection of fluid into rocket nozzle flow field to separate exhaust flow  
[NASA-CASE-XLE-00208] c28 N70-34294
- Double hinged flap for boundary layer control over trailing edges of wings  
[NASA-CASE-XLA-01290] c02 N70-42016
- Separation cell with permeable membranes for fluid mixture component separation  
[NASA-CASE-XMS-02952] c18 N71-20742
- Flow separation detector  
[NASA-CASE-ARC-11046-1] c35 N78-14364

## SEPARATORS

Condenser-separator for dehumidifying air  
utilizing sintered metal surface  
[NASA-CASE-XLA-08645] c15 N69-21465

Unibilical separator for rockets  
[NASA-CASE-XNP-00425] c11 N70-38202

Liquid-gas separator adapted for use in zero  
gravity environment - drawings  
[NASA-CASE-XMS-01624] c15 N7C-40062

Describing apparatus for separating gas from  
cryogenic liquid under zero gravity and for  
venting gas from fuel tank  
[NASA-CASE-XLE-00586] c15 N71-15968

Liquid-gaseous centrifugal separator for  
weightlessness environment  
[NASA-CASE-XLA-00415] c15 N71-16079

Development of liquid separating system using  
capillary device connected to flexible bladder  
storage chamber  
[NASA-CASE-XMS-13052] c14 N71-20427

Vapor-liquid separator design with vapor driven  
pump for separated liquid pumping for  
application in propellant transfer  
[NASA-CASE-XNP-04042] c15 N71-23023

Device for removing air from water for use in  
life support systems in manned space flight  
[NASA-CASE-XLA-8914] c15 N73-12492

Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c34 N74-30608

Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c34 N75-26282

Method and apparatus for fluffing, separating,  
and cleaning fibers  
[NASA-CASE-LAR-11224-1] c37 N76-16456

Gels as battery separators for soluble  
electrode cells  
[NASA-CASE-LEW-12364-1] c44 N77-22606

Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c35 N78-12390

Automatic multiple-sample applicator and  
electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c25 N78-14104

Counter pumping debris excluder and separator  
--- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c67 N78-25090

Inorganic-organic separators for alkaline  
batteries  
[NASA-CASE-LEW-12649-1] c44 N78-25530

Formulated plastic separators for soluble  
electrode cells --- rubber-ion transport  
membranes  
[NASA-CASE-LEW-12358-1] c44 N79-17313

Water separator  
[NASA-CASE-XMS-01295-1] c37 N79-21345

In situ self cross-linking of polyvinyl alcohol  
battery separators  
[NASA-CASE-LEW-12972-1] c44 N79-25481

Partial interlaminar separation system for  
composites  
[NASA-CASE-LAR-12065-1] c24 N81-14000

Advanced inorganic separators for alkaline  
batteries and method of making same --- a  
polymeric coating applied to a porous flexible  
substrate  
[NASA-CASE-LEW-13171-1] c44 N81-22466

Polyvinyl alcohol battery separator containing  
inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c44 N81-27615

Electrophoresis device  
[NASA-CASE-MFS-25426-1] c25 N81-29179

Alkaline battery containing a separator of a  
cross-linked copolymer of vinyl alcohol and  
unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c44 N81-29531

Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c25 N82-11147

**SEQUENCING**

Synchronous counter design incorporating  
cascaded binary stages driven by previous  
stages and inputs through NAND gates  
[NASA-CASE-XGS-02440] c08 N71-19432

Pulse duration control device for driving slow  
response time loads in selected sequence  
including switching and delay circuits and  
magnetic storage  
[NASA-CASE-XGS-04224] c10 N71-26418

Digital function generator for generating any  
arbitrary single valued function  
[NASA-CASE-NPO-11104] c08 N72-22165

MOD 2 sequential function generator for multibit  
sequence, with two-bit shift register for each  
pair of bits  
[NASA-CASE-NPO-10636] c08 N72-25210

Linear shift register with feedback logic for  
generating pseudonoise linear recurring binary  
sequences  
[NASA-CASE-NPO-11406] c08 N73-12175

Mechanical sequencer  
[NASA-CASE-MSC-19536-1] c37 N77-22482

**SEQUENTIAL ANALYSIS**

Binary coded sequential acquisition ranging  
system for distance measurements  
[NASA-CASE-NPO-11194] c08 N72-25209

Event sequence detector with several input and  
shift register responsive to clock pulses  
[NASA-CASE-NPO-11703-1] c10 N73-32144

**SEQUENTIAL COMPUTERS**

Digital data reformatter/deserializer  
[NASA-CASE-NFC-13676-1] c60 N79-20751

**SEQUENTIAL CONTROL**

Linear three-tap feedback shift register  
[NASA-CASE-NPO-10351] c08 N71-12503

Binary sequence detector with few memory  
elements and minimized logic circuit complexity  
[NASA-CASE-XNP-05415] c08 N71-12505

Sequencing device utilizing planetary gear set  
[NASA-CASE-MSC-19514-1] c37 N79-20377

**SERUMS**

Reduction of blood serum cholesterol  
[NASA-CASE-NPG-12119-1] c52 N75-15270

**SERVICE LIFE**

Service life of electromechanical device for  
generating sine/cosine functions  
[NASA-CASE-LAR-10503-1] c09 N72-21248

**SERVOAMPLIFIERS**

Pneumatic servoamplifier for controlling flow  
regulation  
[NASA-CASE-MSC-12121-1] c15 N71-27147

**SERVOCONTROL**

Electronic and mechanical scanning control  
system for monopulse tracking antenna  
[NASA-CASE-XGS-05582] c07 N69-27460

Proportional controller for regulating aircraft  
or spacecraft motion about three axes  
[NASA-CASE-XAC-03392] c03 N70-41954

Modulating and controlling intensity of light  
beam from high temperature source by  
servocontrolled rotating cylinders  
[NASA-CASE-XMS-04300] c09 N71-19479

Servocontrol system for measuring local stresses  
at geometric discontinuity in stressed material  
[NASA-CASE-XLA-08530] c32 N71-25360

System to control speed of hydraulically movable  
members by limiting energy applied to  
actuators with hydraulic servo loop  
[NASA-CASE-ARC-10131-1] c15 N71-27754

Digital servo controller --- for rotating  
antenna shaft  
[NASA-CASE-KSC-10769-1] c33 N74-29556

Digital servo control of random sound test  
excitation --- in reverberant acoustic chamber  
[NASA-CASE-NPO-11623-1] c71 N74-31148

Phase-locked servo system --- for synchronizing  
the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c33 N75-13139

Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c35 N75-25123

Autonomous navigation system --- gyroscopic  
pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c04 N81-21047

System for moving a probe to follow movements of  
tissue  
[NASA-CASE-NPO-15197-1] c52 N81-26697

**SERVO MECHANISMS**

Servo system for retroreflector of Michelson  
interferometer  
[NASA-CASE-NPO-10300] c14 N71-17662

Mechanical function generators with  
potentiometer as sensing element  
[NASA-CASE-XAC-00001] c15 N71-28952

Closed loop servosystem for variable speed tape  
recorders onboard spacecraft  
[NASA-CASE-NPO-10700] c07 N71-33613

Characteristics of lightweight actuator for  
imparting linear motion using elongated output  
shaft  
[NASA-CASE-NPO-11222] c15 N72-25456

- Development and characteristics of rotary actuator for use on spacecraft to deploy and support pivotal structures such as solar panels [NASA-CASE-NPO-10680] c31 N73-14655
- Hydraulic drain means for servo-systems [NASA-CASE-NPO-10316-1] c37 N77-22479
- Actuator mechanism [NASA-CASE-GSC-11883-2] c37 N78-31426
- Apparatus for providing a servo drive signal in a high-speed stepping interferometer [NASA-CASE-NPO-13569-2] c35 N79-14348
- Automated syringe sampler --- remote sampling of air and water [NASA-CASE-LAR-12308-1] c35 N81-29407
- Electrical servo actuator bracket --- fuel control valves on jet engines [NASA-CASE-PRC-11044-1] c37 N81-33483
- A simplified power factor controller with increased energy saving circuit [NASA-CASE-MFS-25323-1] c33 N82-12349
- SERVO MOTORS**
- Automatic closed circuit television arc guidance control for welding joints [NASA-CASE-MFS-13046] c07 N71-19433
- Electric motor control system with pulse width modulation for providing automatic null seeking servo [NASA-CASE-XMF-05195] c10 N71-24861
- Development and characteristics of cyclically operable, optical shutter for use as focal plane shutter for transmitting single radiation pulses [NASA-CASE-NPO-10758] c14 N73-14427
- Development and characteristics of rotary actuator for use on spacecraft to deploy and support pivotal structures such as solar panels [NASA-CASE-NPO-10680] c31 N73-14855
- Velocity servo for continuous scan Fourier interference spectrometer [NASA-CASE-NPO-14093-1] c35 N80-20563
- SEWAGE TREATMENT**
- Sewage sludge additive [NASA-CASE-NPO-13877-1] c45 N82-11634
- SHAFTS (MACHINE ELEMENTS)**
- Fatigue resistant shear pin with hollow shaft and two plugs [NASA-CASE-XLA-09122] c15 N69-27505
- Elastic universal joint for rocket motor mounting [NASA-CASE-XNP-00416] c15 N70-36947
- Air brake device for absorbing and measuring power from rotating shafts [NASA-CASE-XLE-00720] c14 N70-40201
- Two axis flight controller with potentiometer control shafts directly coupled to rotatable ball members [NASA-CASE-YFR-04104] c03 N70-42673
- Ratchet mechanism for high speed operation at reduced backlash [NASA-CASE-MFS-12805] c15 N71-17805
- Universal joints for connecting two displaced shafts or members [NASA-CASE-NFO-10646] c15 N71-28467
- Development of mating flat surfaces to inhibit leakage of fluid around shafts [NASA-CASE-XLE-10326-2] c15 N72-29488
- Fatigue life of hybrid antifriction bearings at ultrahigh speeds [NASA-CASE-LEW-11152-1] c15 N73-32359
- Spiral groove seal --- for hydraulic rotating shaft [NASA-CASE-LEW-10326-3] c37 N74-10474
- Hole cutter --- drill bits and rotating shaft [NASA-CASE-MFS-22649-1] c37 N75-25186
- Twin-capacitive shaft angle encoder with analog output signal [NASA-CASE-ARC-10897-1] c33 N77-31404
- Counter pumping debris excluder and separator --- gas turbine shaft seals [NASA-CASE-LEW-11855-1] c07 N78-25090
- Sequencing device utilizing planetary gear set [NASA-CASE-MSC-19514-1] c37 N79-20377
- Shaft seal assembly for high speed and high pressure applications [NASA-CASE-LEW-11873-1] c37 N79-22475
- Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion [NASA-CASE-NPO-14170-1] c37 N81-15364
- Hot gas engine with dual crankshafts [NASA-CASE-NPO-14221-1] c37 N81-25370
- Circumferential shaft seal [NASA-CASE-LEW-12119-2] c37 N81-26447
- SHALE OIL**
- In-situ laser retorting of oil shale [NASA-CASE-LEW-12217-1] c43 N78-14452
- SHALES**
- Coal-shale interface detection [NASA-CASE-MFS-23720-3] c43 N79-25443
- Coal-shale interface detection system [NASA-CASE-MFS-23720-2] c43 N80-14423
- Coal-shale interface detector [NASA-CASE-MFS-23720-1] c43 N80-23711
- SHAPED CHARGES**
- Coupling device for linear shaped charge for space vehicle abort system [NASA-CASE-XLA-00189] c33 N70-36846
- Development of remotely controlled shaped charge for lateral displacement of rocket stages after separation [NASA-CASE-XLA-04804] c31 N71-23008
- SHAPERS**
- Mandrel for shaping solid propellant rocket fuel into engine casing [NASA-CASE-XLA-00304] c27 N70-34783
- Hand tool for forming dimples and nipples on end portion of tubes [NASA-CASE-XMS-06876] c15 N71-21536
- Dielectric apparatus for heating, fusing, and hardening of organic matrix to form plastic material into shaped product [NASA-CASE-LAR-10121-1] c15 N71-26721
- SHARKS**
- Conditioning tanned sharkskin for use as abrasive resistant clothing [NASA-CASE-XMS-09691-1] c18 N71-15545
- SHARPNESS**
- Method of forming a sharp edge on an optical device [NASA-CASE-GSC-12348-1] c74 N80-24149
- SHEAR CREEP**
- Measuring shear-creep compliance of solid and liquid materials used in spacecraft components [NASA-CASE-XLE-01481] c14 N71-10781
- SHEAR FLOW**
- Shear modulated fluid amplifier of high pressure hydraulic vortex amplifier type [NASA-CASE-MFS-10412] c12 N71-17578
- SHEAR PROPERTIES**
- Describing instrument capable of measuring true shear viscosity of liquids and viscoelastic materials [NASA-CASE-XNF-09462] c14 N71-17584
- SHEAR STRESS**
- Fatigue resistant shear pin with hollow shaft and two plugs [NASA-CASE-XLA-09122] c15 N69-27505
- Development of combined velocimeter and accelerometer based on color changes in liquid crystalline material subjected to shear stresses [NASA-CASE-ERC-10292] c14 N72-25410
- Bonded joint and method --- for reducing peak shear stress in adhesive bonds [NASA-CASE-LAR-10900-1] c37 N74-23064
- SHELLS (STRUCTURAL FORMS)**
- Channel-type shell construction for rocket engines and related configurations [NASA-CASE-XLE-00144] c28 N70-34860
- SHIELDING**
- Flexible bellows joint shielding sleeve for propellant transfer pipelines [NASA-CASE-XNP-01855] c15 N71-28937
- Shielded flat conductor cable of ribbonlike wires laminates in thin flexible insulation [NASA-CASE-MFS-13687-2] c09 N72-22198
- System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems [NASA-CASE-MFS-23513-1] c74 N79-11865
- SHIFT REGISTERS**
- Binary to binary-coded decimal converter using single set of logic circuits notwithstanding number of shift register decades [NASA-CASE-XNP-00432] c08 N70-35423
- Linear three-tap feedback shift register [NASA-CASE-NFO-10351] c08 N71-12503
- Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits



- [NASA-CASE-XNP-01753] c08 N71-22897  
Commutator for steering precisely controlled  
bidirectional currents through numerous loads  
by use of magnetic core shift registers  
[NASA-CASE-NPO-10743] c08 N72-21199  
Multistage feedback shift register with states  
decomposable into cycles of equal length  
[NASA-CASE-NPO-11082] c08 N72-22167  
MOD 2 sequential function generator for multibit  
sequence, with two-bit shift register for each  
pair of bits  
[NASA-CASE-NPO-10636] c08 N72-25210  
Linear shift register with feedback logic for  
generating pseudonoise linear recurring binary  
sequences  
[NASA-CASE-NPO-11406] c08 N73-12175  
Family of m-ary linear feedback shift register  
with binary logic  
[NASA-CASE-NPO-11868] c10 N73-20254  
Nonrecursive counting digital filter containing  
shift register  
[NASA-CASE-NPO-11821-1] c08 N73-26175  
Event sequence detector with several input and  
shift register responsive to clock pulses  
[NASA-CASE-NPO-11703-1] c10 N73-32144  
Method and apparatus for decoding compatible  
convolutional codes  
[NASA-CASE-MSC-14070-1] c32 N74-32598  
Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c33 N76-14373  
Selective data segment monitoring system ---  
using shift registers  
[NASA-CASE-ARC-10899-1] c60 N77-19760  
Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c60 N79-20751
- SHOCK ABSORBERS**  
Pivotal shock absorbing assembly for use as load  
distributing portion in landing gear systems  
of space vehicles  
[NASA-CASE-XMP-03856] c31 N70-34159  
Energy dissipating shock absorbing system for  
land payload recovery or vehicle braking  
[NASA-CASE-XLA-00754] c15 N70-34850  
Shock absorbing couch for body support under  
high acceleration or deceleration forces  
[NASA-CASE-XMS-01240] c05 N70-35152  
Low onset rate energy absorber in form of strut  
assembly for crew couch of Apollo command module  
[NASA-CASE-MSC-12279-1] c15 N70-35679  
Landing pad assembly for aerospace vehicles  
[NASA-CASE-XMF-02853] c31 N70-36654  
Spacecraft shock absorbing system for soft  
landings  
[NASA-CASE-XMP-02108] c31 N70-36845  
Shock absorber for landing gear of lunar or  
planetary landing modules  
[NASA-CASE-XMP-01045] c15 N70-40354  
Shock absorbing articulated multiple couch  
assembly  
[NASA-CASE-MSC-11253] c05 N71-12343  
Design and development of double acting shock  
absorber for spacecraft docking operations  
[NASA-CASE-XMS-03722] c15 N71-21530  
Impact energy absorber with decreasing  
absorption rate  
[NASA-CASE-XLA-01530] c14 N71-23092  
Energy absorbing crew couch strut for Apollo  
command module  
[NASA-CASE-MSC-12279] c15 N72-17450  
Shock absorber for use as protective barrier in  
impact energy absorbing system  
[NASA-CASE-NPO-10671] c15 N72-20443  
Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c19 N76-22284  
Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c37 N79-10420
- SHOCK LOADS**  
Damper system for alleviating air flow shock  
loads on wind tunnel models  
[NASA-CASE-XLA-09480] c11 N71-33612
- SHOCK MEASURING INSTRUMENTS**  
Semiconductor projectile impact detector  
[NASA-CASE-MFS-23008-1] c35 N76-18390
- SHOCK RESISTANCE**  
Removable potting compound for instrument shock  
protection  
[NASA-CASE-XLA-00482] c15 N70-36409  
Thermal shock resistant hafnia ceramic materials  
[NASA-CASE-LAR-10894-1] c18 N73-14584
- Thermal shock and erosion resistant tantalum  
carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206  
Laser surface fusion of plasma sprayed ceramic  
turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190
- SHOCK TUBES**  
Knife structure for controlling rupture of shock  
tube diaphragms  
[NASA-CASE-XAC-00731] c11 N71-15960  
Design, development, and operation of shock tube  
with bypass piston tunnel  
[NASA-CASE-NPO-12109] c11 N72-22245  
Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c09 N77-10071
- SHOCK WAVE INTERACTION**  
Absorptive, nonreflecting barrier mounted  
between closely spaced jet engines on  
supersonic aircraft, for preventing shock wave  
interference  
[NASA-CASE-XLA-02865] c28 N71-15563
- SHOCK WAVE LUMINESCENCE**  
Method and apparatus for measuring shock layer  
radiation distribution about high velocity  
objects  
[NASA-CASE-XAC-02970] c14 N69-39896
- SHOCK WAVE PROFILES**  
Method and apparatus for measuring shock layer  
radiation distribution about high velocity  
objects  
[NASA-CASE-XAC-02970] c14 N69-39896
- SHOCK WAVES**  
Apparatus for mechanically dispersing ultrafine  
metal powders subjected to shock waves  
[NASA-CASE-XLE-04946] c17 N71-24911  
Electrical device for developing converging  
spherical shock waves  
[NASA-CASE-MFS-20890] c14 N72-22439  
Production of intermetallic compounds by effect  
of shock waves from explosions and compaction  
of powder  
[NASA-CASE-MFS-20861-1] c18 N73-32437  
Shock position sensor for supersonic inlets ---  
measuring pressure in the throat of a  
supersonic inlet  
[NASA-CASE-LEW-11915-1] c35 N76-14431
- SHOES**  
Jet shoes for space locomotion  
[NASA-CASE-XLA-08491] c05 N69-21380
- SHORT CIRCUITS**  
Use of silicon controlled rectifier shorting  
circuit to protect thermoelectric generator  
source from thermal destruction  
[NASA-CASE-XGS-04808] c03 N69-25146  
Vacuum thermionic converter with short-circuited  
triodes and increased electron transmission  
and conversion efficiency  
[NASA-CASE-XLE-01015] c03 N69-39898  
Apparatus for automatically testing analog to  
digital converters for open and short circuits  
[NASA-CASE-XLA-06713] c14 N71-28991  
Apparatus including a plurality of spaced  
transformers for locating short circuits in  
cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193
- SHOT PEENING**  
Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c37 N76-18454
- SHROUDED NOZZLES**  
Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c07 N78-27121
- SHROUDED TURBINES**  
Composite seal for turbomachinery --- backings  
for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c37 N79-18318  
Gas path seal  
[NASA-CASE-NPO-12131-3] c37 N80-18400  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c37 N80-26658  
Laser surface fusion of plasma sprayed ceramic  
turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190
- SHROUDS**  
Shrouded composite propulsion system configuration  
[NASA-CASE-XLA-01043] c28 N71-10780  
Composite seal for turbomachinery --- backings  
for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c37 N79-18318

## SHUTTERS

High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c70 N74-21300

## SIDE BANDS

Phase locked loop with sideband rejecting properties in continuous wave tracking radar  
[NASA-CASE-XNP-02723] c07 N70-41680

## SIDELOBE REDUCTION

Multiple mode horn antenna with radiation pattern of equal beamwidths and suppressed sidelobes  
[NASA-CASE-XNP-01057] c07 N71-15907

## SIGNAL ANALYSIS

Design and development of signal detection and tracking apparatus  
[NASA-CASE-IGS-03502] c10 N71-20852

Method and apparatus for a single channel digital communications system --- synchronization of received PCM signal by digital correlation with reference signal  
[NASA-CASE-NPO-11302-2] c32 N74-10132

Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c33 N74-27705

Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c33 N75-26243

Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c32 N76-31372

Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c62 N76-31946

Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c32 N79-28383

## SIGNAL ANALYZERS

Monitoring system for signal amplitude ranges over predetermined time interval  
[NASA-CASE-XMS-04061-1] c09 N69-39885

Feedback controller for sampling error signals within single control formulation time interval  
[NASA-CASE-GSC-10554-1] c08 N71-29033

Development of family of frequency to amplitude converters for frequency analysis of complex input signal waveforms  
[NASA-CASE-MSC-12395] c09 N72-25257

Device for performing statistical time-series analysis of complex electrical signal waveforms  
[NASA-CASE-MSC-12428-1] c10 N73-25240

Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c33 N74-32711

Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c74 N76-19935

Speech analyzer  
[NASA-CASE-GSC-11898-1] c32 N77-30309

## SIGNAL DETECTION

Position locating system for remote aircraft using voice communication and digital signals  
[NASA-CASE-GSC-10087-2] c21 N71-13958

Saturable magnetic core and signal detection for indicating impending saturation  
[NASA-CASE-ERC-10089] c23 N72-17747

Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c32 N77-10392

Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c32 N77-20289

Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c32 N79-10262

Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c33 N79-11313

Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c33 N80-28635

Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c60 N80-30050

Receiving and tracking phase modulated signals  
[NASA-CASE-NSC-16170-2] c32 N81-16338

## SIGNAL DETECTORS

Roughness detector for recording surface pattern of irregularities  
[NASA-CASE-XLA-00203] c14 N70-34161

Electrical testing apparatus for detecting amplitude and width of transient pulse  
[NASA-CASE-XMP-06519] c09 N71-12519

System for monitoring presence of neutrals in streams of ions - ion engine control  
[NASA-CASE-XNP-02592] c24 N71-20518

Development of apparatus for generating output signal commensurate with information contained in input signal  
[NASA-CASE-ERC-10041] c08 N71-29138

Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c43 N80-14423

Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c52 N80-23969

Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c35 N81-19427

Maser amplifier slow wave structure --- detecting weak signals from spacecraft  
[NASA-CASE-NPO-15211-1] c36 N81-24425

## SIGNAL DISTORTION

Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c32 N76-16249

## SIGNAL ENCODING

Adaptive compression signal processor for PCM communication systems  
[NASA-CASE-XLA-03076] c07 N71-11266

Secure communication system  
[NASA-CASE-MSC-16462-1] c32 N78-25274

Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c35 N81-19427

## SIGNAL GENERATORS

Plural recorder system which limits signal recording to signals of sufficient interest  
[NASA-CASE-XMS-06949] c09 N69-21467

Alternating current signal generator providing plurality of amplitude modulated output signals  
[NASA-CASE-XNP-05612] c09 N69-21468

Circuitry for generating sync signals in FM communication systems including video information  
[NASA-CASE-XNP-10830] c07 N71-11281

Apparatus for generating microwave signals at progressively related phase angles for driving antenna array  
[NASA-CASE-ERC-10046] c10 N71-18722

System generating sidereal frequency signals from signals of standard solar frequency without use of mixing operations or feedback loops  
[NASA-CASE-XGS-02610] c14 N71-23174

Hand controller operable about three respectively perpendicular axes and capable of actuating signal generators for attitude control devices  
[NASA-CASE-XMS-07487] c15 N71-23255

Voltage controlled oscillators and pulse amplitude modulation for signal ratio system  
[NASA-CASE-XMP-04367] c09 N71-23545

Sampling circuit for signal processing in multiplex transmission by Fourier analysis  
[NASA-CASE-NPO-10388] c07 N71-24622

Signaling summary alarm circuit with semiconductor switch for faulty contact indications  
[NASA-CASE-XLE-03061-1] c10 N71-24798

Adaptive signal generating system and logic circuits for satellite television systems  
[NASA-CASE-GSC-11367] c10 N71-26374

Device for monitoring voltage by generating signal when voltages drop below predetermined value  
[NASA-CASE-KSC-10020] c10 N71-27338

System for control of variable signal generator  
[NASA-CASE-NPO-11064] c07 N72-11150

Digital function generator for generating any arbitrary single valued function  
[NASA-CASE-NPO-11104] c08 N72-22165

Development of Hall effect transducer for converting mechanical shaft rotations into proportional electrical signals  
[NASA-CASE-LAR-10620-1] c09 N72-25255

Multiterminal Gunn-type semiconductor microwave generator for producing stable signals  
[NASA-CASE-XER-07895] c26 N72-25679

Audio frequency analysis circuit for determining, displaying, and recording frequency of sweeping audio frequency signal  
[NASA-CASE-NPC-11147] c14 N72-27408

Digital servo control of random sound test excitation --- in reverberant acoustic chamber  
[NASA-CASE-NPO-11623-1] c71 N74-31148

Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c35 N75-12270

- System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c33 N75-19519
- Pseudo-noise test, set for communication system  
evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c35 N75-21582
- NDIR gas analyzer based on absorption modulation  
ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c35 N75-30502
- Twin-capacitive shaft angle encoder with analog  
output signal  
[NASA-CASE-ARC-10897-1] c33 N77-31404
- Apparatus for providing a servo drive signal in  
a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c35 N79-14348
- Versatile LDV burst simulator  
[NASA-CASE-LAB-11859-1] c35 N79-14349
- Underwater seismic source --- for petroleum  
exploration  
[NASA-CASE-NPO-14255-1] c46 N79-23555
- Photoelectric detection system  
[NASA-CASE-MFS-23776-1] c74 N80-25134
- Frequency translating phase conjugation circuit  
for active retrodirective antenna array ---  
microwave transmission  
[NASA-CASE-NPO-14536-1] c32 N81-14185
- Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c07 N81-19116
- Adaptive reference voltage generator for firing  
angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c33 N81-31481
- Motor power factor controller with a reduced  
voltage starter  
[NASA-CASE-MFS-25586-1] c33 N82-11360
- SIGNAL MIXING**
- Impedance transformation device for signal mixing  
[NASA-CASE-XGS-01110] c07 N69-24334
- Baseband signal combiner for large aperture  
antenna array  
[NASA-CASE-NPO-14641-1] c32 N81-29308
- SIGNAL PROCESSING**
- Adaptive compression signal processor for PCM  
communication systems  
[NASA-CASE-XLA-03076] c07 N71-11266
- Conversion system for transforming slow scan  
rate of Apollo TV camera on moon to fast scan  
of commercial TV  
[NASA-CASE-XMS-07168] c07 N71-11300
- Difference indicating circuit used in  
conjunction with device measuring  
gravitational fields  
[NASA-CASE-XNP-08274] c10 N71-13537
- Circuitry for developing autocorrelation  
function continuously within signal receiving  
period  
[NASA-CASE-XNP-00746] c07 N71-21476
- System generating sidereal frequency signals  
from signals of standard solar frequency  
without use of mixing operations or feedback  
loops  
[NASA-CASE-XGS-02610] c14 N71-23174
- Feedback integrating circuit with grounded  
capacitor for signal processing  
[NASA-CASE-XAC-10607] c10 N71-23669
- Sampling circuit for signal processing in  
multiplex transmission by Fourier analysis  
[NASA-CASE-NPO-10388] c07 N71-24622
- Video signal processing system for sampling  
video brightness levels  
[NASA-CASE-NPO-10140] c07 N71-24742
- Monopulse scanning network for scanning  
volumetric antenna pattern  
[NASA-CASE-GSC-10299-1] c09 N71-24804
- Apparatus for filtering input signals  
[NASA-CASE-NPO-10198] c09 N71-24806
- Video sync processor with phase locked system  
[NASA-CASE-KSC-10002] c10 N71-25865
- Transient video signal tape recorder with  
expanded playback  
[NASA-CASE-ARC-10003-1] c09 N71-25866
- Scanning signal phase and amplitude electronic  
control device with hybrid T waveguide junction  
[NASA-CASE-NPO-10302] c10 N71-26142
- Variable frequency nuclear magnetic resonance  
spectrometer providing drive signals over wide  
frequency range and minimizing noise effects  
[NASA-CASE-XNP-09830] c14 N71-26266
- Development of apparatus for generating output  
signal commensurate with information contained  
in input signal  
[NASA-CASE-EBC-10041] c08 N71-29138
- Development of electric circuit for production  
of different pulse width signals  
[NASA-CASE-XLA-07788] c09 N71-29139
- Phase shifting circuit for selecting phase of  
input signal  
[NASA-CASE-ARC-10269-1] c10 N72-16172
- Processing system for semiperiodic electrical  
signals to produce real time contoured display  
[NASA-CASE-MSC-13407-1] c10 N72-20225
- Design and characteristics of recording system  
for selective reproprocessing and filtering of  
data to obtain optimum signal to noise ratios  
[NASA-CASE-EBC-10112] c07 N72-21119
- Technique for deriving logarithm of input signal  
using exponentially varying electric signal  
inversely  
[NASA-CASE-EBC-10267] c09 N72-23173
- Development and characteristics of telemetry  
system using computer-accessed circuits and  
remotely controlled from ground station  
[NASA-CASE-NPO-11358] c07 N72-25172
- Characteristics of digital data processor using  
pulse from clock source to derive binary  
signals to show state of various indicators in  
processor  
[NASA-CASE-GSC-10975-1] c08 N73-13187
- Characteristics of two channel telemetry system  
with two data rate channels for high and low  
data rate communication  
[NASA-CASE-NPO-11572] c07 N73-16121
- Measurement system for physical quantity  
represented by or converted to variable  
frequency signal  
[NASA-CASE-MFS-20658-1] c14 N73-30386
- Digital to analog converter for sampled signal  
reconstruction  
[NASA-CASE-MSC-12458-1] c08 N73-32081
- Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c33 N74-11050
- Low level signal limiter  
[NASA-CASE-XLE-04791] c32 N74-22096
- Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c52 N74-26625
- Apparatus and method for processing Korotkov  
sounds --- for blood pressure measurement  
[NASA-CASE-MSC-13999-1] c52 N74-26626
- Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c33 N74-32711
- Continuous Fourier transform method and apparatus  
--- for the analysis of simultaneous analog  
signal components  
[NASA-CASE-ARC-10466-1] c60 N75-13539
- Signal conditioning circuit apparatus --- with  
constant input impedance  
[NASA-CASE-ARC-10348-1] c33 N75-19518
- Television noise reduction device  
[NASA-CASE-MSC-12607-1] c32 N75-21485
- Isolated output system for a class D  
switching-mode amplifier  
[NASA-CASE-MFS-21616-1] c33 N75-30429
- Compact-bi-phase pulse coded modulation decoder  
[NASA-CASE-KSC-10834-1] c33 N76-14371
- Filtering device --- removing electromagnetic  
noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c32 N76-21366
- System for measuring Reynolds in a turbulently  
flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c34 N76-27517
- Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c33 N77-26386
- Apparatus for determining thermophysical  
properties of test specimens  
[NASA-CASE-LAB-11883-1] c09 N77-27131
- Analog to digital converter for two-dimensional  
radiant energy array computers  
[NASA-CASE-GSC-11839-3] c60 N77-32731
- Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c33 N78-10375
- Sweep group delay measurement  
[NASA-CASE-NPO-13909-1] c33 N78-25319
- Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c33 N78-32338
- Bit error rate measurement above and below bit  
rate tracking threshold  
[NASA-CASE-MSC-12743-1] c32 N79-10263
- Multibeam single frequency synthetic aperture  
radar processor for imaging separate range  
swaths

[NASA-CASE-NPO-14525-1] c32 N79-19195  
Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c25 N79-24073  
Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c32 N79-28383  
Scannable beam forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c32 N80-28578  
System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c31 N80-32584  
Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c35 N81-12386  
Navigation system and method  
[NASA-CASE-GSC-12508-1] c04 N81-26085  
CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c33 N81-27396  
Interleaving device  
[NASA-CASE-GSC-12111-2] c33 N81-29342

**SIGNAL RECEPTION**  
Radar signal receiver arrangement for extending range and increasing signal to noise ratio  
[NASA-CASE-XNP-00748] c07 N70-36911  
Reflectometer for receiver input impedance match measurement  
[NASA-CASE-XNP-10843] c07 N71-11267  
Diversity receiving system with diversity phase lock  
[NASA-CASE-XGS-01222] c10 N71-20841  
Design and development of signal detection and tracking apparatus  
[NASA-CASE-XGS-03502] c10 N71-20852  
Development of optimum pre-detection diversity combining receiving system adapted for use with amplitude modulation, phase modulation, and frequency modulation systems  
[NASA-CASE-XGS-00740] c07 N71-23098  
Binary data decoding device for use at receiving end of communication channel  
[NASA-CASE-NPO-10118] c07 N71-24741  
Development of electronic circuit for combining input signals on two separate antennas to form two processed signals  
[NASA-CASE-MSC-12205-1] c07 N71-27056  
Input signal measurement using liquid crystalline elements  
[NASA-CASE-ERC-10275] c26 N72-25680  
Filter for third order phase locked loops in signal receivers  
[NASA-CASE-NPO-11941-1] c10 N73-27171  
Electromechanical actuator for producing mechanical force and/or motion in response to electrical signals  
[NASA-CASE-NPO-11738-1] c09 N73-30185  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c35 N76-16391  
Receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c32 N81-16338  
Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c35 N82-15381

**SIGNAL REFLECTION**  
Reflectometer for receiver input impedance match measurement  
[NASA-CASE-XNP-10843] c07 N71-11267  
Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c32 N78-31321  
Doppler radar having phase modulation of both transmitted and reflected return signals --- ranging  
[NASA-CASE-MSC-18675-1] c32 N81-29312

**SIGNAL STABILIZATION**  
Linear accelerator frequency control system  
[NASA-CASE-XGS-05441] c10 N71-22962  
Development of apparatus for generating output signal commensurate with information contained in input signal  
[NASA-CASE-ERC-10041] c08 N71-29138  
System for interference signal nulling by polarization adjustment  
[NASA-CASE-NPO-13140-1] c32 N75-24982

**SIGNAL TO NOISE RATIOS**  
Semiconductor in resonant cavity for improving signal to noise ratio of communication receiver  
[NASA-CASE-MSC-12259-1] c07 N70-12616  
Radar signal receiver arrangement for extending range and increasing signal to noise ratio  
[NASA-CASE-XNP-00748] c07 N70-36911

Detector assembly for discriminating first signal with respect to presence or absence of second signal at time of occurrence of first signal  
[NASA-CASE-XMF-00701] c09 N70-40272  
Automatic estimation of signal to noise ratio and other parameters in signal communication systems  
[NASA-CASE-XNP-05254] c07 N71-20791  
Voltage controlled oscillators and pulse amplitude modulation for signal ratio system  
[NASA-CASE-XMF-04367] c09 N71-23545  
Design and characteristics of recording system for selective reproprocessing and filtering of data to obtain optimum signal to noise ratios  
[NASA-CASE-ERC-10112] c07 N72-21119  
Development of idler feedback system to reduce electronic noise problem in two parametric amplifiers  
[NASA-CASE-LAR-10253-1] c09 N72-25258  
Superconductive resonant cavity for improved signal to noise ratio in communication signal  
[NASA-CASE-MSC-12259-2] c07 N72-33146  
Signal to noise ratio determination circuit using bandpass limiter  
[NASA-CASE-GSC-11239-1] c10 N73-25241  
Gated compressor, distortionless signal limiter  
[NASA-CASE-NPO-11820-1] c32 N74-19788

**SIGNAL TRANSMISSION**  
Synchronizing apparatus for multi-access satellite time division multiplex system  
[NASA-CASE-XGS-05918] c07 N69-39974  
Electro-mechanical circuit for converting floating intelligence signal to common electrically grounded intelligence recorder  
[NASA-CASE-XAC-00086] c09 N70-33182  
Demodulator for simultaneous demodulation of two modulating ac signal carriers close in frequency  
[NASA-CASE-XMF-01160] c07 N71-11298  
Bipolar phase detector and corrector for split phase PCM data signals  
[NASA-CASE-XGS-01590] c07 N71-12392  
Automatic estimation of signal to noise ratio and other parameters in signal communication systems  
[NASA-CASE-XNP-05254] c07 N71-20791  
Multiplexed communication system design including automatic correction of transmission errors introduced by frequency spectrum shifts  
[NASA-CASE-XNP-01306] c07 N71-20814  
Adaptive notch filter, using modulation techniques for reversed phase noise signal  
[NASA-CASE-XMF-01892] c10 N71-22986  
Pulse generator for synchronizing or resetting electronic signals without requiring separate external source  
[NASA-CASE-XGS-03632] c09 N71-23311  
Device for locating electrically nonlinear objects and determining distance to object by FM signal transmission  
[NASA-CASE-KSC-10108] c14 N73-25461  
Television multiplexing system, using single crystal controlled clock for signal synchronization  
[NASA-CASE-KSC-10654-1] c07 N73-30115  
Controlled oscillator system with a time dependent output frequency  
[NASA-CASE-NPO-11962-1] c33 N74-10194  
Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12462-1] c32 N74-20809  
Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12494-1] c32 N74-20810  
Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c32 N75-21486  
Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c32 N75-24981  
Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c35 N77-14411  
Automatic transponder --- measurement of the internal delay time of a transponder  
[NASA-CASE-GSC-12075-1] c32 N77-31350  
Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c74 N78-14889

- Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c32 N79-23310
- Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c32 N81-14186
- Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c33 N81-17349
- SIGNATURE ANALYSIS**  
Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c43 N79-17288
- Optical signature generating and correlating apparatus  
[NASA-CASE-NFO-15226-1] c74 N81-15899
- SILANES**  
Preparation of elastomeric diamine silazane polymers  
[NASA-CASE-XMF-04133] c06 N71-20717
- Synthesis of high purity dianilinosilanes  
[NASA-CASE-XMF-06409] c06 N71-23230
- Process for preparing high molecular weight polyaryloxysilanes from lower molecular weight forms  
[NASA-CASE-XMF-08674] c06 N71-28807
- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ABC-10915-2] c27 N79-18052
- Thermal reactor and process --- liquid silicon production from silane  
[NASA-CASE-NPO-14369-1] c25 N80-20338
- Thermal control coatings based on trialkoxysilane hydrolyzate binders --- tolerance to ultraviolet radiation in vacuum  
[NASA-CASE-MFS-25620-1] c24 N82-11118
- SILICA GEL**  
Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c44 N77-22606
- SILICATES**  
Ultraviolet radiation resistant alkali-metal silicate coatings for temperature control of spacecraft  
[NASA-CASE-XGS-04119] c18 N69-35979
- Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c24 N79-31347
- SILICIDES**  
Silicide coating process and composition for protection of refractory metals from oxidation  
[NASA-CASE-XLE-10910] c18 N71-29040
- Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c27 N76-16229
- SILICON**  
Method of forming thin window drifted silicon charged particle detector  
[NASA-CASE-XLE-00808] c24 N71-10560
- Gadolinium or samarium doped-silicon semiconductor material with resistance to radiation damage for use in solar cells  
[NASA-CASE-XLE-10715] c26 N71-23292
- Metal pattern bonding technique for cover glass attachment to silicon solar cells for space applications  
[NASA-CASE-XLE-08569] c03 N71-23449
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c44 N76-14600
- Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c76 N79-11920
- Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c26 N80-14229
- Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c31 N80-18231
- Thermal reactor and process --- liquid silicon production from silane  
[NASA-CASE-NFO-14369-1] c25 N80-20338
- A silicon-slurry/aluminide coating --- protects aircraft and land-based gas turbine engines  
[NASA-CASE-LEW-13343-1] c24 N80-26389
- System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c37 N80-29703
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NFO-14297-1] c33 N81-19389
- Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NEC-14831-1] c76 N81-19944
- Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c37 N82-11469
- SILICON CARBIDES**  
Deposition method for epitaxial beta SiC films having high degree of crystallographic perfection  
[NASA-CASE-ERC-10120] c26 N69-33482
- Producing high purity silicon carbide on carbon base by hydrogen reduction of silicon tetrachloride  
[NASA-CASE-XLA-00158] c26 N70-36805
- Device for producing high purity silicon carbide on carbon base by hydrogen reduction of silicon tetrachloride  
[NASA-CASE-XLA-02057] c26 N70-40015
- Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c76 N76-25049
- Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c76 N79-23798
- SILICON COMPOUNDS**  
Doping silicon material with gadolinium to increase radiation resistance of solar cells  
[NASA-CASE-XLE-02792] c26 N71-10607
- Process for preparing disilanolols with in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979-2] c06 N73-32030
- Infusible silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMF-02526-1] c27 N79-21190
- SILICON CONTROLLED RECTIFIERS**  
Use of silicon controlled rectifier shorting circuit to protect thermoelectric generator source from thermal destruction  
[NASA-CASE-XGS-04808] c03 N69-25146
- Silicon controlled rectifier inverter with compensation of transients to avoid false gating  
[NASA-CASE-XLA-08507] c09 N69-39984
- Reversible ring counter using cascaded single silicon controlled rectifier stages  
[NASA-CASE-XGS-01473] c09 N71-10673
- Silicon controlled rectifier pulse gate amplifier for blocking false gating caused by negative transient voltages  
[NASA-CASE-XLA-07497] c09 N71-12514
- SILICON DIOXIDE**  
Intermittent type silica gel adsorption refrigerator for providing temperature control for spacecraft components  
[NASA-CASE-XNP-00920] c15 N71-15906
- Nose cone mounted heat resistant antenna comprising plurality of adjacent layers of silica not introducing paths of high thermal conductivity through ablative shield  
[NASA-CASE-XMS-04312] c07 N71-22984
- Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient  
[NASA-CASE-ERC-10073-1] c24 N74-19769
- Silica reusable surface insulation  
[NASA-CASE-ABC-10721-1] c27 N76-22376
- Two-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-1] c27 N76-22377
- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c74 N78-15879
- Field effect transistor and method of construction thereof  
[NASA-CASE-MFS-23312-1] c33 N78-27326
- Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ABC-11169-1] c24 N79-24062
- Improved attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MSC-18741-1] c16 N81-16110
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c76 N81-30012
- Castable high temperature refractory materials  
[NASA-CASE-LEW-13080-2] c27 N82-11210
- SILICON FILMS**  
Deposition method for epitaxial beta SiC films

- having high degree of crystallographic perfection  
[NASA-CASE-ERC-10120] c26 N69-33482
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c35 N81-12389
- SILICON JUNCTIONS**  
Improving radiation resistance of silicon semiconductor junctions by doping with lithium  
[NASA-CASE-XGS-07801] c09 N71-12513
- SILICON NITRIDES**  
Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient  
[NASA-CASE-ERC-10073-1] c24 N74-19769  
Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c44 N77-14580  
Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c37 N81-25371
- SILICON OXIDES**  
Three-component ceramic coating for silica insulation  
[NASA-CASE-MS-C-14270-2] c27 N76-23426
- SILICON POLYMERS**  
Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-01915-2] c27 N79-18052
- SILICON RADIATION DETECTORS**  
Lithium drifted silicon radiation detector with gold rectifying contacts  
[NASA-CASE-XLE-10529] c14 N69-23191  
Silicon radiation detecting probe design for in vivo biomedical use  
[NASA-CASE-XMS-01177] c05 N71-19440
- SILICON TRANSISTORS**  
Vapor deposition method for forming metallized tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c09 N72-25259  
Development of method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c15 N72-25457
- SILICONE RESINS**  
Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c37 N76-24575
- SILICONES**  
Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c28 N80-28536
- SILICONIZING**  
Vapor deposited laminated nitride-silicon coating for corrosion prevention of carbonaceous surfaces  
[NASA-CASE-XLA-00284] c15 N71-16075
- SILOXANES**  
Synthesis of siloxane containing epoxy polymers with low dielectric properties  
[NASA-CASE-MFS-13994-1] c06 N71-11240  
Method for producing alternating ether-siloxane copolymers with stable properties when exposed to elevated temperatures and UV radiation  
[NASA-CASE-XMF-02584] c06 N71-20905  
Synthesis of siloxane containing epoxide and diamine polymers  
[NASA-CASE-MFS-13994-2] c06 N72-25148  
Silphenylenesiloxane polymer with in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c06 N72-25151  
Fluid polydimethylsiloxane resin with low outgassing properties in cured state  
[NASA-CASE-GSC-11358-1] c06 N73-26100
- SILVER**  
Dry electrode manufacture, using silver powder with cement  
[NASA-CASE-FRC-10029-2] c05 N72-25121
- SILVER ALLOYS**  
Brazing alloy composition  
[NASA-CASE-XMF-06053] c26 N75-27126
- SILVER CHLORIDES**  
Electrochemically reversible silver-silver chloride electrode for detecting bioelectric potential differences generated by human muscles and organs  
[NASA-CASE-XMS-02872] c05 N69-21925  
Silver chloride use in technique for fusion bonding of graphite to silver, glass, ceramics, and certain other metals  
[NASA-CASE-XGS-00963] c15 N69-39735
- SILVER COMPOUNDS**  
Description of electrical equipment and system for purification of waste water by producing silver ions for bacterial control  
[NASA-CASE-MS-C-10960-1] c03 N71-24718
- SILVER ZINC BATTERIES**  
Elimination of two step voltage discharge property of silver zinc batteries by using divalent silver oxide capacity of cell to charge anodes to monovalent silver state  
[NASA-CASE-XGS-01674] c03 N71-29129  
Additive for zinc electrodes  
[NASA-CASE-LEW-13286-1] c44 N81-27597
- SIMULATORS**  
Development of apparatus for simulating zero gravity conditions  
[NASA-CASE-MFS-12750] c27 N71-16223  
Phonocardiogram simulator producing electrical voltage waves to control amplitude and duration between simulated sounds  
[NASA-CASE-XKS-10804] c05 N71-24606  
Sign wave generation simulator for variable amplitude, frequency, damping, and phase pulses for oscilloscope display  
[NASA-CASE-NPO-10251] c10 N71-27365  
Laser Doppler velocity simulator --- to induce frequency shift  
[NASA-CASE-LAR-12176-1] c36 N80-16321
- SINE SERIES**  
Service life of electromechanical device for generating sine/cosine functions  
[NASA-CASE-LAR-10503-1] c09 N72-21248  
Function generators for producing complex vibration mode patterns used to identify vibration mode data  
[NASA-CASE-LAR-10310-1] c10 N73-20253
- SINE WAVES**  
Sign wave generation simulator for variable amplitude, frequency, damping, and phase pulses for oscilloscope display  
[NASA-CASE-NPO-10251] c10 N71-27365  
Wideband generator for producing sine wave quadrature and second harmonic of input signal  
[NASA-CASE-NPO-11133] c10 N72-20223  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c33 N77-26387
- SINGLE CRYSTALS**  
Producing high purity silicon carbide on carbon base by hydrogen reduction of silicon tetrachloride  
[NASA-CASE-XLA-00158] c26 N70-36805  
Single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c09 N72-22199  
Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c35 N75-13213  
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c25 N75-26043  
Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c76 N79-21910  
Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c76 N79-23798
- SINTERING**  
Condenser-separator for dehumidifying air utilizing sintered metal surface  
[NASA-CASE-XLA-08645] c15 N69-21465  
Production of refractory bodies with controlled porosity by pressing and heating mixtures of refractory and inert metal powders  
[NASA-CASE-LEW-10393-1] c17 N71-15468
- SIZE (DIMENSIONS)**  
Development of apparatus for producing metal powder particles of controlled size  
[NASA-CASE-XLE-06461-2] c17 N72-28535
- SIZE DETERMINATION**  
Impact measuring technique for determining size of hypervelocity projectiles  
[NASA-CASE-LAR-10913] c14 N72-16282  
Small conductive particle sensor --- microfiber size determination  
[NASA-CASE-LAR-12552-1] c35 N82-11431
- SIZE SEPARATION**  
Method and apparatus for precision sizing and joining of large diameter tubes by bulging or constricting overlapping ends  
[NASA-CASE-XMF-05114-2] c15 N71-26148  
Device which separates and screens particles of soil samples for vidicon viewing in vacuum and reduced gravity environments

- [NASA-CASE-XNP-09770-3] c11 N71-27036
- SIZING (SHAPING)**  
Method and apparatus for shaping and joining large diameter metal tubes using magnetomotive forces  
[NASA-CASE-XNP-05114] c15 N71-17650
- SIZING SCREENS**  
Method for making screen with unlimited fineness of mesh and screen thickness  
[NASA-CASE-XLE-00953] c15 N71-15966  
Screen particle separator for soil samples  
[NASA-CASE-XNP-09770-2] c15 N72-22483
- SKETCHES**  
Tape guidance system for multichannel digital recording system  
[NASA-CASE-XNP-09453] c08 N71-19420  
Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c33 N76-18353
- SKID LANDINGS**  
Nose gear steering system for vehicles with main skids to provide directional stability after loss of aerodynamic control  
[NASA-CASE-XLA-01804] c02 N70-34160
- SKIN (ANATOMY)**  
Conditioning tanned sharkskin for use as abrasive resistant clothing  
[NASA-CASE-XMS-09691-1] c18 N71-15545  
Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c52 N77-14738  
Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c52 N81-27783
- SKIN (STRUCTURAL MEMBER)**  
Development of resilient fastener for attaching skin of aerospace vehicles to permit movement of skin relative to framework  
[NASA-CASE-XLA-01027] c31 N71-24035  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c31 N81-14137
- SKIN FRICTION**  
Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c06 N81-17057  
Dual-beam skin friction interferometer --- portable equipment  
[NASA-CASE-ARC-11354-1] c36 N81-29415
- SKIN TEMPERATURE (BIOLOGY)**  
Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c52 N77-10780
- SKIN TEMPERATURE (NON-BIOLOGICAL)**  
Heat flux sensor adapted for mounting on aircraft or spacecraft to measure aerodynamic heat flux inflow to aircraft skin  
[NASA-CASE-XFP-03802] c33 N71-23085
- SKIRTS**  
Inflatable rocket engine nozzle skirt with transpiration cooling  
[NASA-CASE-MFS-20619] c28 N72-11708
- SKY BRIGHTNESS**  
Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c47 N80-26992
- SLEEP**  
Development of apparatus and method for quantitatively measuring brain activity as automatic indication of sleep state and level of consciousness  
[NASA-CASE-MSC-13282-1] c05 N71-24729
- SLEEVES**  
Nonreusable energy absorbing device comprising ring member with plurality of recesses, cutting members, and guide member mounted in each recess  
[NASA-CASE-XNF-10040] c15 N71-22877  
System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c37 N75-33395  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c31 N81-14137
- SLENDER BODIES**  
Support techniques for restraint of slender bodies such as launch vehicles
- [NASA-CASE-XLA-02704] c11 N69-21540
- SLENDER WINGS**  
Means for controlling aerodynamically induced twist --- equipment to control twisting of slender wings due to aerodynamic loads  
[NASA-CASE-LAR-12175-1] c05 N80-16055  
Leading edge vortex flaps for drag reduction --- during subsonic flight  
[NASA-CASE-LAR-12750-1] c02 N81-19016
- SLICING**  
Method and apparatus for slicing crystals  
[NASA-CASE-GSC-12291-1] c76 N80-18951  
System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c37 N80-29703  
Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c37 N82-11469
- SLIDING CONTACT**  
Electrical connector pin with wiping action to assure reliable contact  
[NASA-CASE-XMF-04238] c09 N69-39734  
Development of slip ring assembly with inner and outer peripheral surfaces used as electrical contacts for brushes  
[NASA-CASE-XMF-01049] c15 N71-23049
- SLIDING FRICTION**  
Bearing material --- composite material with low friction surface for rolling or sliding contact  
[NASA-CASE-LEW-11930-1] c24 N76-22309
- SLIP CASTING**  
Freeze casting of metal ceramic and refractory compound powders into plastic slips  
[NASA-CASE-XLE-00106] c15 N71-16076
- SLITS**  
Slit regulated gas journal bearing  
[NASA-CASE-XNP-00476] c15 N70-38620  
Method of fabricating an object with a thin wall having a precisely shaped slit  
[NASA-CASE-LAR-10409-1] c31 N74-21059  
Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c35 N80-28686
- SLOPES**  
Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c35 N77-27367
- SLOT ANTENNAS**  
Planar array circularly polarized antenna with wall slot excitation  
[NASA-CASE-NPO-10301] c07 N72-11148  
Omnidirectional antenna array with circumferential slots for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c09 N72-25247  
Circularly polarized antenna with linearly polarized pair of elements  
[NASA-CASE-ERC-10214] c09 N72-31235  
Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c32 N74-20864  
Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c32 N76-15330
- SLOTS**  
Belleville spring assembly with elastic guides having low hysteresis  
[NASA-CASE-XNP-09452] c15 N69-27504  
Direct lift control system having flaps with slots adjacent to their leading edge and particularly adapted for lightweight aircraft  
[NASA-CASE-LAR-10249-1] c02 N71-26110  
Slotted fine-adjustment support for optical devices  
[NASA-CASE-MFS-20249] c15 N72-11386  
Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c37 N81-14319
- SLUDGE**  
Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c45 N82-11634
- SLURRY PROPELLANTS**  
Apparatus for producing hydrocarbon slurry containing small particles of magnesium for use as jet aircraft fuel  
[NASA-CASE-XLE-00010] c15 N70-33382
- SMOKE**  
Development of method for protecting large and oddly shaped areas from radiant and convective heat  
[NASA-CASE-XNP-01310] c33 N71-28852  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c45 N76-17656



Smoke generator  
[NASA-CASE-ARC-10905-1] c37 N77-13418

**SODIUM CHLORIDES**  
Composition of diffuse reflective coating  
containing sodium chloride in combination with  
diol solvent and organic wetting and drying  
agents  
[NASA-CASE-GSC-11214-1] c06 N73-13128

**SODIUM VAPOR**  
Method of producing silicon --- gas phase  
reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c31 N80-18231

**SOFT LANDING**  
Non-reusable kinetic energy absorber for  
application in soft landing of space vehicles  
[NASA-CASE-XLE-00810] c15 N70-34861

Spacecraft shock absorbing system for soft  
landings  
[NASA-CASE-XMP-02108] c31 N70-36845

Payload soft landing system using stowable gas bag  
[NASA-CASE-XLA-09881] c31 N71-16085

**SOFT LANDING SPACECRAFT**  
Pivotal shock absorbing assembly for use as load  
distributing portion in landing gear systems  
of space vehicles  
[NASA-CASE-XMF-03856] c31 N70-34159

**SOIL MECHANICS**  
Penetrometer --- for determining load bearing  
characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c35 N77-27367

**SOIL MOISTURE**  
Radar target for remotely sensing hydrological  
phenomena  
[NASA-CASE-LAR-12344-1] c43 N80-18498

**SOIL SCIENCE**  
Auger-type soil penetrometer for burrowing into  
soil formations  
[NASA-CASE-XNP-05530] c14 N73-32321

System for plotting subsoil structure and method  
therefor  
[NASA-CASE-NPO-14191-1] c31 N80-32584

**SOILS**  
Screen particle separator for soil samples  
[NASA-CASE-XNP-05770-2] c15 N72-22483

Soil burrowing mole apparatus  
[NASA-CASE-XNP-07169] c15 N73-32362

Remote sensing of vegetation and soil using  
microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c43 N78-10529

**SOL-GEL PROCESSES**  
Alkali-metal silicate binders and methods of  
manufacture  
[NASA-CASE-GSC-12303-1] c24 N79-31347

**SOLAR ACTIVITY**  
Radiometric measuring system for solar activity  
and atmospheric attenuation and emission  
[NASA-CASE-ERC-10276] c14 N73-26432

**SOLAR ARRAYS**  
Deployable cantilever support for deploying  
solar cell arrays aboard spacecraft and  
reducing transient loading  
[NASA-CASE-NPO-10883] c31 N72-22874

Electrical interconnection of unilluminated  
solar cells in solar battery array  
[NASA-CASE-GSC-10344-1] c03 N72-27053

Development of solar energy powered heliotrope  
assembly to orient solar array toward sun  
[NASA-CASE-GSC-10945-1] c21 N72-31637

Method of making silicon solar cell array ---  
and mounting on flexible substrate  
[NASA-CASE-LEW-11069-1] c44 N74-14784

Solar cell shingle  
[NASA-CASE-LEW-12587-1] c44 N77-31601

Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c44 N78-27515

Solar array strip and a method for forming the  
same  
[NASA-CASE-NPO-13652-1] c44 N79-17314

Closed loop solar array-icn thruster system with  
power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179

Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 N79-24431

Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c44 N79-25482

Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c44 N79-26475

Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c44 N80-14474

Solar power satellite system  
[NASA-CASE-HCN-10949-1] c44 N81-16530

Electrical rotary joint apparatus for large  
space structures  
[NASA-CASE-MFS-23981-1] c33 N81-19394

**SOLAR CELLS**  
Fabricating solar cells with dielectric layers  
to improve glass fusion  
[NASA-CASE-XGS-04531] c03 N69-24267

Solar radiation direction detector and device  
for compensating degradation of photocells  
[NASA-CASE-XLA-00183] c14 N70-40239

Attitude control system for spacecraft based on  
conversion of incident solar radiation on  
movable control surfaces into mechanical torques  
[NASA-CASE-XNP-02982] c31 N70-41855

Simulating voltage-current characteristic curves  
of solar cell panel with different operational  
parameters  
[NASA-CASE-XMS-01554] c10 N71-10578

Doping silicon material with gadolinium to  
increase radiation resistance of solar cells  
[NASA-CASE-XLI-02792] c26 N71-10607

Modifying existing solar cells for temperature  
control  
[NASA-CASE-NFO-10109] c03 N71-11049

Solar battery with interconnecting means for  
plural cells  
[NASA-CASE-XNP-06506] c03 N71-11050

Fabrication methods for matrices of solar cell  
submodules  
[NASA-CASE-XNP-05821] c03 N71-11056

Metal strip mounting arrangement for solar cell  
arrays on spacecraft  
[NASA-CASE-XGS-01475] c03 N71-11058

Conductor for connecting parallel cells into  
submodules in series to form solar cell matrix  
[NASA-CASE-NFO-10821] c03 N71-19545

Space erectable rollup solar array of arcuate  
solar panels furled on tapered drum for  
spacecraft storage during launch  
[NASA-CASE-NPO-10188] c03 N71-20273

Electrode connection for n-on-p silicon solar cell  
[NASA-CASE-XLE-04787] c03 N71-20492

Fabrication of solar cell banks for attaching  
solar cells to base members or substrates  
[NASA-CASE-XNP-00826] c03 N71-20895

Gallium arsenide solar cell preparation by  
surface deposition of cuprous iodide on thin  
n-type polycrystalline layers and heating in  
iodine vapor  
[NASA-CASE-XNP-01960] c09 N71-23027

Gadolinium or samarium doped-silicon  
semiconductor material with resistance to  
radiation damage for use in solar cells  
[NASA-CASE-XLE-10715] c26 N71-23292

Maintaining current flow through solar cells  
with open connection using shunting diode  
[NASA-CASE-XLE-04535] c03 N71-23354

Metal pattern bonding technique for cover glass  
attachment to silicon solar cells for space  
applications  
[NASA-CASE-XLE-08569] c03 N71-23449

Addition of group 3 elements to silicon  
semiconductor material for increased  
resistance to radiation damage in solar cells  
[NASA-CASE-XLE-02798] c26 N71-23654

Method of attaching cover glass to silicon solar  
cell without using adhesive  
[NASA-CASE-XLE-08569-2] c03 N71-24681

Method and apparatus for fabricating solar cell  
panels  
[NASA-CASE-XNP-03413] c03 N71-26726

Development and characteristics of solar cells  
with phosphors in cover glass to improve  
response to solar ultraviolet radiation  
[NASA-CASE-ARC-10050] c03 N71-33409

Electrically coupled individually encapsulated  
solar cell matrix  
[NASA-CASE-NFO-11190] c03 N71-34044

Recovering efficiency of solar cells damaged by  
environmental radiation through thermal  
annealing  
[NASA-CASE-XGS-04047-2] c03 N72-11062

Spacecraft solar cell system with switching  
circuit to provide compensation for  
environmental changes  
[NASA-CASE-GSC-10669-1] c03 N72-20031



- Test method and equipment for identifying faulty cells or connections in solar cell assemblies  
[NASA-CASE-NPO-10401] c03 N72-20033
- Electrically connected matrix of discrete solar cell blanks  
[NASA-CASE-NPO-10591] c03 N72-22041
- Solar cell panel with light transmitting cover plate  
[NASA-CASE-NPO-10747] c03 N72-22042
- Development of process for constructing protective covers for solar cells  
[NASA-CASE-GSC-11514-1] c03 N72-24037
- Apparatus for applying thin glass slides to solar cells  
[NASA-CASE-NPO-10575] c03 N72-25019
- Electrical interconnection of unilluminated solar cells in solar battery array  
[NASA-CASE-GSC-10344-1] c03 N72-27053
- Rectangular solar cell stacked panels to generate electrical power aboard spacecraft  
[NASA-CASE-NPO-11771] c03 N73-20040
- Method of making silicon solar cell array --- and mounting on flexible substrate  
[NASA-CASE-LEW-11069-1] c44 N74-14784
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c44 N76-14600
- Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c44 N76-28635
- Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c44 N76-31666
- Photovoltaic cell array  
[NASA-CASE-MPS-22458-1] c44 N77-10635
- Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c44 N77-14580
- Solar cell assembly --- for use under high intensity illumination  
[NASA-CASE-LEW-11549-1] c44 N77-19571
- High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c44 N78-13526
- Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c33 N78-17256
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c44 N78-24609
- Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c44 N78-25528
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c44 N78-25529
- Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c44 N78-27515
- Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c44 N79-11468
- Method and apparatus for measuring minority carrier lifetimes and bulk diffusion length in P-N junction solar cells  
[NASA-CASE-NPO-14100-1] c44 N79-12541
- Back wall solar cell  
[NASA-CASE-LEW-12236-2] c44 N79-14528
- Method for fabricating solar cells having integrated collector grids  
[NASA-CASE-LEW-12819-2] c44 N79-18444
- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c44 N79-19447
- Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c44 N79-25482
- Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c44 N79-31752
- Solar cell module  
[NASA-CASE-NPO-14467-1] c44 N79-31753
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c44 N80-14472
- Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c44 N80-18551
- Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c44 N80-18552
- Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c44 N80-24741
- Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c44 N80-29835
- Improving the efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c44 N80-32850
- Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c44 N81-12542
- Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c44 N81-14389
- High voltage planar multijunction --- solar cells  
[NASA-CASE-LEW-13400-1] c44 N81-16528
- High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c44 N81-19558
- Schottky barrier cell and method of fabricating it  
[NASA-CASE-NPO-13689-4] c44 N81-26553
- Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c44 N81-27598
- Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c44 N81-29525
- SOLAR COLLECTORS**
- Expanding and contracting connector strip for solar cell array of Nimbus satellite  
[NASA-CASE-XGS-01395] c03 N69-21539
- Concentrator device for controlling direction of solar energy onto energy converters  
[NASA-CASE-XLE-01716] c09 N70-40234
- Space erectable rollup solar array of arcuate solar panels furled on tapered drum for spacecraft storage during launch  
[NASA-CASE-NPO-10188] c03 N71-20273
- Storage stable, thermally activated foaming compositions for erecting and rigidizing mechanisms of thin sheet solar collectors  
[NASA-CASE-LAR-10373-1] c18 N71-26155
- Development and characteristics of solar cells with phosphors in cover glass to improve response to solar ultraviolet radiation  
[NASA-CASE-ARC-10050] c03 N71-33409
- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MPS-23267-1] c35 N77-20401
- Solar cell shingle  
[NASA-CASE-LEW-12587-1] c44 N77-31601
- Solar energy collection system  
[NASA-CASE-NPO-13810-1] c44 N77-32582
- Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NFC-13736-1] c44 N77-32583
- Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c44 N78-10554
- Solar heating system  
[NASA-CASE-LAR-12009-1] c44 N78-15560
- Low cost solar energy collection system  
[NASA-CASE-NFC-13579-1] c44 N78-17460
- Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c44 N78-19599
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c44 N78-25527
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c44 N78-31526
- Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c44 N79-11467
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MPS-23518-1] c44 N79-11469
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13817-1] c44 N79-11471
- Solar cell collector and method for producing same  
[NASA-CASE-LEW-12552-2] c44 N79-11472
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c32 N79-19186
- Horizontally mounted solar collector  
[NASA-CASE-MPS-23349-1] c44 N79-23481
- Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c44 N79-24432
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c44 N79-24433
- Solar concentrator  
[NASA-CASE-MPS-23727-1] c44 N80-14473
- Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c44 N80-20810

- Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183] c44 N80-29843
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c44 N81-17518
- Solar tracking system  
[NASA-CASE-MFS-23999-1] c44 N81-24520
- Method of forming oxide coatings  
[NASA-CASE-LEW-13132-1] c44 N81-27616
- SOLAR ELECTRIC PROPULSION**  
Closed loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179
- SOLAR ENERGY**  
Rectangular solar cell stacked panels to generate electrical power aboard spacecraft  
[NASA-CASE-NPO-11771] c03 N73-20040
- Solar energy power system --- using Freon  
[NASA-CASE-MFS-21628-1] c44 N75-32581
- Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c44 N76-14602
- Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c44 N77-32580
- Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c44 N77-32583
- Solar heating system  
[NASA-CASE-LAR-12009-1] c44 N78-15560
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c44 N78-25529
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c44 N79-11469
- Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c44 N79-14529
- Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c44 N79-26475
- Solar cell module  
[NASA-CASE-NPO-14467-1] c44 N79-31753
- Solar energy modulator  
[NASA-CASE-NPO-15388-1] c44 N82-10496
- SOLAR ENERGY ABSORBERS**  
Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c44 N76-14595
- Solar energy absorber  
[NASA-CASE-MFS-22743-1] c44 N76-22657
- Solar energy trap  
[NASA-CASE-MFS-22744-1] c44 N76-24696
- Solar cell shingle  
[NASA-CASE-LEW-12587-1] c44 N77-31601
- Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c44 N78-17460
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-MOO-00428-1] c32 N79-19186
- Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c44 N80-16452
- Method for depositing an oxide coating --- producing solar panels  
[NASA-CASE-LEW-13131-1] c26 N81-24230
- A stable density-stratification solar pond  
[NASA-CASE-NPO-15419-1] c44 N81-27599
- SOLAR ENERGY CONVERSION**  
Solar energy power system  
[NASA-CASE-MFS-21628-2] c44 N76-23675
- High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c44 N78-13526
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c44 N78-24609
- Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c44 N79-11470
- Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c44 N79-18443
- Solar concentrator  
[NASA-CASE-MFS-23727-1] c44 N80-14473
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c44 N81-19558
- Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c44 N81-32609
- SOLAR FLUX DENSITY**  
Solar energy modulator  
[NASA-CASE-NPO-15388-1] c44 N82-10496
- SOLAR FURNACES**  
Lens assembly for solar furnace or solar simulator  
[NASA-CASE-XNP-04111] c14 N71-15622
- SOLAR GENERATORS**  
Describing method for vapor deposition of gallium arsenide films to manganese substrates to provide semiconductor devices with low resistance substrates  
[NASA-CASE-XNP-01328] c26 N71-18064
- Microwave power converter  
[NASA-CASE-NPO-14068-1] c44 N78-19609
- SOLAR GRAVITATION**  
Table structure and rotating magnet system simulating gravitational forces on spacecraft and displaying trajectories between Earth, Venus, and Mercury  
[NASA-CASE-XNP-00708] c14 N70-35394
- SOLAR HEATING**  
Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c44 N78-10554
- Solar heating system  
[NASA-CASE-LAR-12009-1] c44 N78-15560
- Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c44 N80-20810
- SOLAR OBSERVATORIES**  
Light sensitive control system for automatically opening and closing dome of solar optical telescope  
[NASA-CASE-MSC-10966] c14 N71-19568
- SOLAR PONDS (HEAT STORAGE)**  
Solar pond  
[NASA-CASE-NPO-13581-2] c44 N78-31525
- A stable density-stratification solar pond  
[NASA-CASE-NPO-15419-1] c44 N81-27599
- SOLAR POSITION**  
Sun angle calculator  
[NASA-CASE-MSC-12617-1] c35 N76-29552
- Solar tracking system  
[NASA-CASE-MFS-23999-1] c44 N81-24520
- SOLAR POWERED AIRCRAFT**  
Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c05 N81-32138
- SOLAR RADIATION**  
Space simulator with uniform test region radiation distribution, adapted to simulate Venus solar radiations  
[NASA-CASE-XNP-00459] c11 N70-38675
- Design and characteristics of device for sensing solar radiation and providing spacecraft attitude control to maintain direction with respect to incident radiation  
[NASA-CASE-XNP-05535] c14 N71-23040
- Utilization of solar radiation by solar still for converting salt and brackish water into potable water  
[NASA-CASE-XMS-04533] c15 N71-23086
- Wide angle sun sensor --- consisting of cylinder, insulation and pair of detectors  
[NASA-CASE-NEC-13327-1] c35 N75-23910
- Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c34 N77-18382
- SOLAR RADIATION SHIELDING**  
High temperature glass thermal control structure and coating  
[NASA-CASE-ARC-11164-1] c27 N82-10228
- SOLAR RADIO EMISSION**  
System generating sidereal frequency signals from signals of standard solar frequency without use of mixing operations or feedback loops  
[NASA-CASE-XGS-02610] c14 N71-23174
- SOLAR REFLECTORS**  
Foldable, double cone and parabolic reflector system for solar ray concentration  
[NASA-CASE-XLA-04622] c03 N70-41580
- Modifying existing solar cells for temperature control  
[NASA-CASE-NPO-10109] c03 N71-11049
- Fabrication of curved reflector segments for solar mirror  
[NASA-CASE-XLE-08917] c15 N71-15597
- Thermal pump-compressor for converting solar energy  
[NASA-CASE-XLA-00377] c33 N71-17610

- Forming mold for polishing and machining curved solar magnesium reflector with reinforcing ribs  
[NASA-CASE-XLE-08917-2] c15 N71-24836
- Inorganic thermal control and solar reflector coatings  
[NASA-CASE-MFS-20011] c18 N72-22566
- Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c74 N77-28933
- Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c44 N79-14529
- Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c44 N79-24432
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c44 N79-24433
- SOLAR SAILS**
- Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c27 N80-16163
- Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c37 N81-15364
- SOLAR SENSORS**
- Sensor consisting of photocells mounted on pyramidal base for improved pointing accuracy of planetary trackers  
[NASA-CASE-XNP-04180] c07 N69-39736
- Spacecraft attitude control system using solar and earth sensors, gyroscopes, and jet actuators  
[NASA-CASE-XNP-00465] c21 N70-35395
- Sun tracker with rotatable plane-parallel plate and two photocells  
[NASA-CASE-XGS-01159] c21 N71-10678
- Solar sensor with coarse and fine sensing elements for matching preirradiated cells on degradation rates  
[NASA-CASE-XLA-01584] c14 N71-23269
- Sun direction detection system  
[NASA-CASE-NPO-13722-1] c74 N77-22951
- Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c44 N79-14526
- Solar tracking system  
[NASA-CASE-MFS-23999-1] c44 N81-24520
- SOLAR SIMULATORS**
- Lens assembly for solar furnace or solar simulator  
[NASA-CASE-XNP-04111] c14 N71-15622
- High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c33 N74-12913
- SOLDERED JOINTS**
- Soldering device particularly suited to making high quality wiring joints for aerospace engineering utilizing capillary attraction to regulate flow of solder  
[NASA-CASE-XLA-08911] c15 N71-27214
- SOLDERING**
- Hydrazine monoperfluoro alkanoate solder flux leaving corrosion resistant coating, for metals such as copper  
[NASA-CASE-XNP-03459-2] c18 N71-15688
- Metal soldering with hydrazine monoperfluoro alkanoate for corrosion resistant coatings  
[NASA-CASE-XNP-03459] c15 N71-21078
- Method of plating copper on aluminum to permit conventional soldering of structural aluminum bodies  
[NASA-CASE-XLA-08566-1] c17 N71-25903
- Device for resistance soldering electrical leads to solder cups of multiple terminal block  
[NASA-CASE-GSC-10913] c15 N72-22491
- Development of electrical system for indicating optimum contact between electrode and metal surface to permit improved soldering operation  
[NASA-CASE-KSC-10242] c15 N72-23497
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 N79-24431
- SOLDERS**
- Solder coating process for printed copper circuit protection  
[NASA-CASE-XMF-01599] c09 N71-20705
- Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c26 N77-29260
- SOLENOID VALVES**
- Solenoid two-step valve for bipropellant flow rate control to rocket engine  
[NASA-CASE-XMS-04890-1] c15 N70-22192
- Automatic recording McLeod gage with three electrodes and solenoid valve connection  
[NASA-CASE-XLE-03280] c14 N71-23093
- Solenoid valve including guide for armature and valve member  
[NASA-CASE-GSC-10607-1] c15 N72-20442
- Remote fire stack igniter --- with solenoid-controlled valve  
[NASA-CASE-MPS-21675-1] c25 N74-33378
- Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c09 N75-12968
- SOLENOIDS**
- Water cooled solenoid capable of producing magnetic field intensities up to 100 kilogauss  
[NASA-CASE-XNP-01951] c09 N70-41929
- Automatic power supply circuit design for driving inductive loads and minimizing power consumption including solenoid example  
[NASA-CASE-NPO-10716] c09 N71-24892
- Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly --- for use with cameras mounted in satellites  
[NASA-CASE-GSC-11560-1] c33 N74-20861
- Sprag solenoid brake --- development and operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c37 N74-26976
- Low temperature latching solenoid  
[NASA-CASE-MSC-18106-1] c33 N82-11357
- SOLID CRYOGEN COOLING**
- Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c34 N82-10358
- SOLID ELECTRODES**
- Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c35 N78-25391
- SOLID LUBRICANTS**
- Bonded solid lubricant coatings of calcium fluoride and binder for high temperature stability  
[NASA-CASE-XMS-00259] c18 N70-36400
- Solid lubricant applied to porous roller bearings prior to use in ultrahigh vacuum  
[NASA-CASE-XLE-09527] c15 N71-17688
- Preparation of inorganic solid film lubricants with long wear life and stability in aerospace environments  
[NASA-CASE-XMF-03988] c15 N71-21403
- Development of rolling element bearing for operation in ultrahigh vacuum environment  
[NASA-CASE-XLE-09527-2] c15 N71-26189
- Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c24 N79-17916
- SOLID PHASES**
- An improved solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c33 N81-16385
- SOLID PROPELLANT IGNITION**
- Solid propellant ignition with hypergolic fluid injected to predetermined portions of propellant  
[NASA-CASE-XLE-00207] c28 N70-33375
- Method for igniting solid propellant rocket motors by injecting hypergolic fluids  
[NASA-CASE-XLE-01988] c27 N71-15634
- Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275
- SOLID PROPELLANT ROCKET ENGINES**
- Spherical solid propellant rocket engine design  
[NASA-CASE-XLA-00105] c28 N70-33331
- Mandrel for shaping solid propellant rocket fuel into engine casing  
[NASA-CASE-XLA-00304] c27 N70-34783
- Spherical solid propellant rocket engine having abrupt burnout  
[NASA-CASE-XHQ-01897] c28 N70-35381
- Grain configuration for solid propellant rocket engines  
[NASA-CASE-XGS-03556] c27 N70-35534
- Solid propellant rocket vehicle thrust control method and apparatus  
[NASA-CASE-XNF-00217] c28 N70-38181
- Steerable solid propellant rocket motor adapted to effect payload orientation as multistage rocket stage or reduce velocity as retrorocket  
[NASA-CASE-XNP-00234] c28 N70-38645
- Method of making solid propellant rocket motor having reliable high altitude capabilities, long shelf life, and capable of firing with nozzle closure with foamed plastic permanent mandrel  
[NASA-CASE-XLA-04126] c28 N71-26779

- Electrical failure detector in solid rocket propellant motor insulation against thermal degradation by fuel grain  
[NASA-CASE-XMF-03968] c14 N71-27186
- Solid propellant rocket engine with venting system to control effective nozzle throat area  
[NASA-CASE-XNP-03282] c28 N72-20758
- Thin walled nozzle with insulative nonablative coating for solid propellant rocket engines  
[NASA-CASE-NPO-11458] c28 N72-23810
- Characteristics of solid propellant rocket engine with controlled rate of thrust buildup operating in vacuum environment  
[NASA-CASE-NPO-11559] c28 N73-24784
- Space vehicle  
[NASA-CASE-MFS-22734-1] c18 N75-19329
- Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-1349] c20 N77-17143
- Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275
- Solid propellant motor  
[NASA-CASE-NPO-11458A] c20 N78-32179
- SOLID PROPELLANTS**
- Variable thrust ion engine using thermal decomposition of solid cesium compound to produce propulsive vapor  
[NASA-CASE-XNP-00923] c28 N70-36802
- Photographic method for measuring viscoelastic strain in solid propellants and other materials  
[NASA-CASE-XNP-01153] c32 N71-17645
- Ethylene oxide sterilization and encapsulating process for sterile preservation of instruments and solid propellants  
[NASA-CASE-XNP-05763] c14 N71-20461
- Chemical process for production of polyisobutylene compounds and application as solid rocket propellant binder  
[NASA-CASE-NPO-10893] c27 N73-22710
- SOLID ROCKET BINDERS**
- Liner for hybrid solid propellants to bind propellant to rocket motor case  
[NASA-CASE-XNP-03744] c27 N71-16392
- Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c28 N80-28536
- SOLID ROCKET PROPELLANTS**
- Using ethylene oxide in preparation of sterilized solid rocket propellants and encapsulating materials  
[NASA-CASE-XNP-01749] c27 N70-41897
- Pressurized gas injection for burning rate control of solid propellants  
[NASA-CASE-XLE-03494] c27 N71-21819
- Solid propellant stabilizer containing nitroguanidine  
[NASA-CASE-NPO-12000] c27 N72-25699
- Solid propellant containing hydrazinium nitroformate oxidizer and polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c27 N73-16764
- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c28 N74-33209
- Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c28 N77-10213
- Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-1349] c20 N77-17143
- High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c28 N79-28342
- Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c28 N80-23471
- Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c28 N80-28536
- SOLID STATE**
- Solid state chemical source for ammonia beam masers  
[NASA-CASE-XGS-01504] c16 N70-41578
- SOLID STATE DEVICES**
- Solid state switching circuit design to increase current capacity of low rated relay contacts  
[NASA-CASE-XNP-09228] c09 N69-27500
- Temperature compensated solid state differential amplifier with application in bioinstrumentation circuits  
[NASA-CASE-XAC-00435] c09 N70-35440
- Solid state operational integrator  
[NASA-CASE-NPO-10230] c09 N71-12520
- Microwave power receiving antenna solving heat dissipation problems by construction of elements as heat pipe devices  
[NASA-CASE-MFS-20333] c09 N71-13486
- Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits  
[NASA-CASE-XNP-01753] c08 N71-22897
- Solid state television camera system consisting of monolithic semiconductor mosaic sensor and molecular digital readout systems  
[NASA-CASE-XMF-06092] c07 N71-24612
- Solid state circuit for switching alternating current input signal as function of direct current gating transistor  
[NASA-CASE-XNP-06505] c10 N71-24799
- Solid state force measuring electromechanical transducers made of piezoresistive materials  
[NASA-CASE-ERC-10088] c26 N71-25490
- Development and characteristics of solid state acoustic variable time delay line using direct current voltage and radio frequency pulses  
[NASA-CASE-ERC-10032] c10 N71-25900
- Solid state broadband stable power amplifier  
[NASA-CASE-XNP-10854] c10 N71-26331
- Solid state remote circuit selector switching circuit  
[NASA-CASE-LEW-10387] c09 N72-22201
- Radio frequency controlled solid state switch  
[NASA-CASE-ARC-10136-1] c09 N72-22202
- Development of thermal to electric power conversion system using solid state switches of electrical currents to load for Seebeck effect compensation  
[NASA-CASE-NFO-11388] c03 N72-23048
- Solid state switch for variable circuit switching  
[NASA-CASE-NFO-10817-1] c08 N73-30135
- Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c33 N74-14939
- Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HCN-10069] c33 N75-27251
- Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c33 N77-14335
- Space-charge-limited solid-state triode  
[NASA-CASE-NFO-13064-1] c33 N79-11314
- Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c33 N80-33679
- Optical crystal temperature gauge with fiber optic connections --- cryogenic systems  
[NASA-CASE-MS-18627-1] c74 N81-15818
- SOLID SURFACES**
- Dye penetrant and technique for nondestructive tests of solid surfaces contacted by liquid oxygen  
[NASA-CASE-XMF-02221] c18 N71-27170
- SOLID WASTES**
- Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MS-14831-1] c25 N78-10225
- SOLID-SOLID INTERFACES**
- Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c43 N79-25443
- Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c43 N79-31706
- SOLIDIFICATION**
- Containerless melting and rapid solidification apparatus and method  
[NASA-CASE-MFS-25305-1] c35 N81-16427
- Method and apparatus for supercooling and solidifying substances --- containerless melts and space processing  
[NASA-CASE-MFS-25242-1] c35 N81-24413
- SOLIDIFIED GASES**
- Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c34 N82-10358
- SOLUBILITY**
- Fireproof potassium silicate coating composition, insoluble in water after application  
[NASA-CASE-GSC-10072] c18 N71-14014
- Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NFC-13530-1] c25 N81-17187

## SOLUTES

Specific wavelength colorimeter --- for measuring given solute concentration in test sample  
[NASA-CASE-MSC-14081-1] c35 N74-27860

## SOLUTIONS

Asymmetric polyimide separation membrane and method  
[NASA-CASE-NFO-15431-1] c25 N81-29178

## SOLVENT EXTRACTION

Recovery of aluminum from composite propellants  
[NASA-CASE-NFO-14110-1] c28 N81-15119  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NFO-15767-1] c28 N82-12241

## SOLVENTS

Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NFO-14272-1] c25 N81-33246

## SONIC BOOMS

Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c35 N75-19614  
Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c07 N76-27232

## SORBATES

Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c35 N78-19465

## SORET COEFFICIENT

Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c24 N77-27187

## SOUND GENERATORS

Ejectable underwater sound source recovery assembly  
[NASA-CASE-LAR-10595-1] c35 N74-16135

## SOUND LOCALIZATION

Resolution enhanced sound detecting apparatus  
[NASA-CASE-NFO-14134-1] c71 N79-23753

## SOUND PRESSURE

Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c35 N75-19614  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c71 N78-14867

## SOUND PROPAGATION

System for plotting subsoil structure and method therefor  
[NASA-CASE-NFO-14191-1] c31 N80-32584

## SOUND TRANSDUCERS

Method and transducer device for detecting presence of hydrogen gas  
[NASA-CASE-XNF-03873] c06 N69-39733  
Sensor for detecting and measuring energy, velocity and direction of travel of a cosmic dust particle  
[NASA-CASE-GSC-10503-1] c14 N72-20381  
Resolution enhanced sound detecting apparatus  
[NASA-CASE-NFO-14134-1] c71 N79-23753  
Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c52 N80-23569  
Acoustic system for material transport  
[NASA-CASE-NFO-15453-1] c71 N82-12889

## SOUND WAVES

Piezoelectric transducer for monitoring sound waves of physiological origin  
[NASA-CASE-XMS-05365] c14 N71-22993  
Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NFO-13263-1] c12 N75-24774  
Acoustic energy shaping  
[NASA-CASE-NFO-13802-1] c71 N78-10837  
Acoustic driving of rotor  
[NASA-CASE-NFO-14005-1] c71 N79-20827  
Acoustic suspension system  
[NASA-CASE-NFO-15435-1] c71 N81-27887

## SOUNDING ROCKETS

Development of attitude control system for sounding rocket stabilization during ballistic phase of flight  
[NASA-CASE-XGS-01654] c31 N71-24750  
System for deploying and ejecting releasable clamshell fairing sections from spinning sounding rockets  
[NASA-CASE-GSC-10590-1] c31 N73-14653

## SPACE CAPSULES

Assembly for opening flight capsule stabilizing and decelerating flaps with reference to capsule recovery  
[NASA-CASE-XNF-00641] c31 N70-36410  
Design and configuration of manned space capsule  
[NASA-CASE-XLA-01332] c31 N71-15664  
Describing assembly for opening stabilizing and decelerating flaps of flight capsules used in space research  
[NASA-CASE-XMF-03169] c31 N71-15675

## SPACE CHARGE

Space-charge-limited solid-state triode  
[NASA-CASE-NFO-13064-1] c33 N79-11314

## SPACE COMMUNICATION

Radio receiver with array of independently steerable antennas for deep space communication  
[NASA-CASE-XLA-00901] c07 N71-10775  
Design and development of tracking receiver for tracking satellites and receiving radio signal transmissions under adverse noise conditions  
[NASA-CASE-XGS-08679] c10 N71-21473  
Development of antenna system for spin stabilized communication satellite for simultaneous reception and transmission of data  
[NASA-CASE-XGS-02607] c31 N71-23009  
Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NFO-13545-1] c32 N77-12240

## SPACE ENVIRONMENT SIMULATION

Simulating voltage-current characteristic curves of solar cell panel with different operational parameters  
[NASA-CASE-XMS-01554] c10 N71-10578  
Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment  
[NASA-CASE-XLE-01182] c27 N71-15635  
Cable suspension and inclined walkway system for simulating reduced or zero gravity environments  
[NASA-CASE-XLA-01787] c11 N71-16028  
Space environment simulation system for measuring spacecraft electric field strength in plasma sheath  
[NASA-CASE-XLE-02038] c09 N71-16086  
Optical characteristics measuring apparatus  
[NASA-CASE-XNF-08840] c23 N71-16365  
Omnidirectional anisotropic molecular trap, used with vacuum pump to simulate space environments for testing spacecraft components  
[NASA-CASE-XGS-00783] c30 N71-17788  
Space environmental work simulator with portions of space suit mounted to vacuum chamber wall  
[NASA-CASE-XNF-07488] c11 N71-18773  
Low and zero gravity simulator for astronaut training  
[NASA-CASE-MFS-10555] c11 N71-19494  
Self lubricating fluoride-metal composite materials for outer space applications  
[NASA-CASE-XLE-08511] c18 N71-23710  
Test chamber for determining decomposition and autoignition of materials used in spacecraft under controlled environmental conditions  
[NASA-CASE-KSC-10198] c11 N71-28629  
Illumination system design for use as sunlight simulator in space environment simulators with multiple light sources reflected to single virtual source  
[NASA-CASE-HCN-10781] c23 N71-30292  
Pressure regulator for space suit worn underwater to simulate space environment for testing and experimentation  
[NASA-CASE-MFS-20332] c05 N72-20097

## SPACE ERECTABLE STRUCTURES

Self-erectable space structures of flexible foam for application in planetary orbits  
[NASA-CASE-XLA-00686] c31 N70-34135  
Manned space station collapsible for launching and self-erectable in orbit  
[NASA-CASE-XLA-00678] c31 N70-34296  
Manned space station launched in packaged condition and self erecting in orbit  
[NASA-CASE-XLA-00258] c31 N70-38676  
Collapsible, space erectable loop antenna system for space vehicle  
[NASA-CASE-XNF-00437] c07 N70-40202  
Erectable, inflatable, radio signal reflecting passive communication satellite

- [NASA-CASE-XLA-00210] c30 N70-40309  
Deployment system for flexible wing with rigid superstructure
- [NASA-CASE-XLA-01220] c02 N70-41863  
Capillary radiator for carrying heat transfer liquid in planetary spacecraft structures
- [NASA-CASE-XLE-03307] c33 N71-14035  
Describing apparatus for manufacturing operations in low and zero gravity environments of orbital space flight
- [NASA-CASE-MFS-20410] c15 N71-19214  
Space erectable rollup solar array of arcuate solar panels furled on tapered drum for spacecraft storage during launch
- [NASA-CASE-NPO-10188] c03 N71-20273  
Self erecting parabolic reflector design for use in space
- [NASA-CASE-XMS-03454] c09 N71-20658  
Pneumatic cantilever beams and platform for space erectable structure
- [NASA-CASE-XLA-01731] c32 N71-21045  
Hydraulic actuator design for space deployment of heat radiators
- [NASA-CASE-MSC-11817-1] c15 N71-26611  
Space expandable tether device for use as passageway between two docked spacecraft
- [NASA-CASE-XMS-10993] c15 N71-28936  
Expandable space frames with high expansion to collapse ratio
- [NASA-CASE-ERC-10365-1] c31 N73-32749  
Apparatus for assembling space structure
- [NASA-CASE-MFS-23579-1] c18 N79-11108  
Lightweight structural columns --- space erectable trusses
- [NASA-CASE-LAR-12095-1] c31 N81-25258  
Telescoping columns --- parabolic antenna support
- [NASA-CASE-LAR-12195-1] c31 N81-27324
- SPACE EXPLORATION**  
Self-propelled vehicle with wheel, track laying, and walking capability for exploratory exploration
- [NASA-CASE-NPO-11366] c11 N73-26238
- SPACE FLIGHT**  
Portable environmental control and life support system for astronaut in and out of spacecraft
- [NASA-CASE-XMS-05632-1] c05 N71-11203  
Television simulation for aircraft and space flight
- [NASA-CASE-XFR-03107] c09 N71-19449
- SPACE FLIGHT FEEDING**  
Helmet feedport
- [NASA-CASE-XMS-09653] c54 N78-17680
- SPACE INDUSTRIALIZATION**  
Apparatus for assembling space structure
- [NASA-CASE-MFS-23579-1] c18 N79-11108
- SPACE MAINTENANCE**  
System for removing and repairing spacecraft control thrusters by use of portable air locks
- [NASA-CASE-MFS-20325] c28 N71-27095
- SPACE MANUFACTURING**  
Material suspension within an acoustically excited resonant chamber --- at near weightless conditions
- [NASA-CASE-NPO-13263-1] c12 N75-24774  
Method for manufacturing mirrors in zero gravity environment
- [NASA-CASE-MSC-12611-1] c12 N76-15189  
Apparatus for assembling space structure
- [NASA-CASE-MFS-23579-1] c18 N79-11108  
Structural members, method and apparatus
- [NASA-CASE-MSC-16217-1] c31 N81-27323
- SPACE MISSIONS**  
Planetary atmospheric investigation using split trajectory dual flyby mode
- [NASA-CASE-XAC-08494] c30 N71-15990  
Elimination of tracking occultation problems occurring during continuous monitoring of interplanetary missions by using Earth orbiting communications satellite
- [NASA-CASE-XAC-06029-1] c31 N71-24613  
Design and development of space shuttle system for delivering payload to earth orbit or celestial orbit
- [NASA-CASE-MSC-12391] c30 N73-12884
- SPACE NAVIGATION**  
Electrical and electromechanical trigonometric computation assembly and space vehicle guidance system for aligning perpendicular axes of two sets of three-axes coordinate references
- [NASA-CASE-XMF-00684] c21 N71-21688  
Momentum wheel design for spacecraft attitude control and magnetic drum and head system for data storage
- [NASA-CASE-NFO-11481] c21 N73-13644  
Method for producing reticles for use in outer space
- [NASA-CASE-GSC-11188-2] c21 N73-19630
- SPACE ORIENTATION**  
Sensing method and device for determining orientation of space vehicle or satellite by using particle traps
- [NASA-CASE-XGS-00466] c21 N70-34297
- SPACE PROCESSING**  
Method and apparatus for supercooling and solidifying substances --- containless melts and space processing
- [NASA-CASE-MFS-25242-1] c35 N81-24413
- SPACE RENDEZVOUS**  
Method and apparatus for connecting two spacecraft with probe of one inserted in rocket engine nozzle of other spacecraft
- [NASA-CASE-MFS-11133] c31 N71-16222
- SPACE SHUTTLE ORBITERS**  
Improved attachment system for silica tiles --- thermal protection for space shuttle orbiter
- [NASA-CASE-MSC-18741-1] c16 N81-16110
- SPACE SHUTTLES**  
Designing spacecraft for flight into space, atmospheric reentry, and landing at selected sites
- [NASA-CASE-XAC-02058] c02 N71-16087  
Design and development of space shuttle system for delivering payload to earth orbit or celestial orbit
- [NASA-CASE-MSC-12391] c30 N73-12884  
Spacecraft configurations and aerodynamic characteristics of space shuttle systems with two reusable stages
- [NASA-CASE-MSC-12433] c31 N73-14854  
Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system
- [NASA-CASE-MSC-14245-1] c18 N75-27041  
Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components
- [NASA-CASE-LEW-11179-1] c27 N76-16229  
Device for coupling a first vehicle to a second vehicle
- [NASA-CASE-GSC-12429-1] c37 N81-14320  
System for sterilizing objects --- cleaning space vehicle systems
- [NASA-CASE-KSC-11085-1] c54 N81-24724  
Terminal guidance sensor system --- space shuttle coupling to orbiting satellites
- [NASA-CASE-NFO-14521-1] c37 N81-27519
- SPACE SIMULATORS**  
Space simulator with uniform test region radiation distribution, adapted to simulate Venus solar radiations
- [NASA-CASE-XNF-00459] c11 N70-38675  
Variable geometry manned orbital vehicle having high aerodynamic efficiency over wide speed range and incorporating auxiliary pivotal wings
- [NASA-CASE-XLA-03691] c31 N71-15674  
Development of method and equipment for testing heat radiative properties of material under controlled environmental conditions
- [NASA-CASE-MFS-20096] c14 N71-30026  
Biocentrifuge system capable of exchanging specimen cages while in operational mode
- [NASA-CASE-MFS-23825-1] c51 N81-32829
- SPACE STATIONS**  
Manned space station launched in packaged condition and self erecting in orbit
- [NASA-CASE-XLA-00258] c31 N70-38676  
Meteoroid impact position locator aid for manned space station
- [NASA-CASE-LAR-10629-1] c35 N75-33367  
Multiple in-line docking capability for rotating space stations
- [NASA-CASE-MFS-20855-1] c15 N77-10112
- SPACE SUITS**  
Astronaut restraint suit for high acceleration protection
- [NASA-CASE-XAC-00405] c05 N70-41819

- Space suit with pressure-volume compensator system  
[NASA-CASE-XLA-05332] c05 N71-11194
- Equipotential space suits utilizing mechanical  
aids to minimize astronaut energy at bending  
joints  
[NASA-CASE-LAR-10007-1] c05 N71-11195
- One piece human garment for use as contamination  
proof garment  
[NASA-CASE-MSC-12206-1] c05 N71-17599
- Space environmental work simulator with portions  
of space suit mounted to vacuum chamber wall  
[NASA-CASE-XMF-07488] c11 N71-18773
- Space suit body heat exchanger design composed  
of thermal conductance yarn and liquid coolant  
loops  
[NASA-CASE-XMS-09571] c05 N71-19439
- Conditioning suit for normal function of  
astronaut cardiovascular system in gravity  
environment  
[NASA-CASE-XLA-02898] c05 N71-20268
- Space suit using nonflexible material with low  
leakage and providing protection against  
thermal extremes, physical punctures, and  
radiation with high mobility articulation  
[NASA-CASE-XAC-07043] c05 N71-23161
- Sealing evacuation port and evacuating vacuum  
container such as space jackets  
[NASA-CASE-XMF-03290] c15 N71-23256
- Structure of fabric layers for micrometeoroid  
protection garment with capability for  
eliminating heat shorts for use in  
manufacturing space suits  
[NASA-CASE-MSC-12109] c18 N71-26265
- Venting device for pressurized space suit helmet  
to eliminate vomit expelled by crewmen  
[NASA-CASE-XMS-09652-1] c05 N71-26333
- Automatic control device for regulating inlet  
water temperature of liquid cooled spacesuit  
[NASA-CASE-MSC-13917-1] c05 N72-15098
- Pressure regulator for space suit worn  
underwater to simulate space environment for  
testing and experimentation  
[NASA-CASE-MFS-20332] c05 N72-20097
- Space suit with improved waist and torso movement  
[NASA-CASE-ARC-10275-1] c05 N72-22092
- Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c05 N73-25125
- Automatic temperature control for liquid cooled  
space suit  
[NASA-CASE-ARC-10599-1] c05 N73-26071
- Intra- and extravehicular life support space  
suite for Apollo astronauts  
[NASA-CASE-MSC-12609-1] c05 N73-32012
- Non-flammable elastomeric fiber from a  
fluorinated elastomer and containing an  
halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c27 N76-24405
- Protective garment ventilation system  
[NASA-CASE-XMS-04928] c54 N78-17679
- Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c54 N78-18761
- Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c54 N78-31735
- Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c54 N78-31736
- Cooling system for removing metabolic heat from  
an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721
- Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c54 N79-24651
- Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c54 N80-30043
- Absorbent product and articles made therefrom  
--- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c24 N81-16127
- SPACE TOOLS**
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c54 N81-26718
- SPACE TRANSPORTATION SYSTEM**
- Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c37 N80-14398
- SPACE VEHICLE CHECKOUT PROGRAM**
- Hydraulic support apparatus for dynamic testing  
of space vehicles under near-free flight  
conditions  
[NASA-CASE-XMF-03248] c11 N71-10604
- Digital computer system for automatic prelaunch  
checkout of spacecraft  
[NASA-CASE-XKS-08012-2] c31 N71-15566
- Developing high pressure gas purification and  
filtration system for use in test operations  
of space vehicles  
[NASA-CASE-MFS-12806] c14 N71-17588
- SPACEBORNE TELESCOPES**
- Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c89 N79-10969
- Cooled echelle grating spectrometer --- for  
space telescope applications  
[NASA-CASE-NPO-14372-1] c35 N80-26635
- SPACECRAFT**
- Metal strip mounting arrangement for solar cell  
arrays on spacecraft  
[NASA-CASE-XGS-01475] c03 N71-11058
- Attitude sensor with scanning mirrors for  
detecting orientation of space vehicle with  
respect to planet  
[NASA-CASE-XLA-00793] c21 N71-22880
- Negation of magnetic fields produced by thin  
waferlike circuit elements in space vehicles  
[NASA-CASE-XGS-03390] c03 N71-23187
- Low mass ionizing device for use in electric  
thrust spacecraft engines  
[NASA-CASE-XNP-01954] c28 N71-28850
- Vacuum chamber with scale model of rocket engine  
base area of space vehicle  
[NASA-CASE-MFS-20620] c11 N72-27262
- SPACECRAFT ANTENNAS**
- Low loss parasitic probe antenna for prelaunch  
tests of spacecraft antennas  
[NASA-CASE-XKS-09348] c09 N71-13521
- Millimeter wave antenna system for spacecraft use  
[NASA-CASE-GSC-10949-1] c07 N71-28965
- Low weight, integrated thermoelectric  
generator/antenna combination for spacecraft  
[NASA-CASE-XER-09521] c09 N72-12136
- Omnidirectional antenna array with  
circumferential slots for mounting on  
cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c09 N72-25247
- Furlable antenna for spacecraft  
[NASA-CASE-NPC-11361] c07 N72-32169
- Collapsible support for antenna reflector  
applied to installation of spacecraft antennas  
[NASA-CASE-NPC-11751] c07 N73-24176
- Multi-channel rotating optical interface for  
data transmission  
[NASA-CASE-NFC-14066-1] c74 N79-34011
- Antenna deployment mechanism for use with a  
spacecraft --- extensible and retractable  
telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c18 N80-14183
- SPACECRAFT CABIN ATMOSPHERES**
- Thermal control wall panel with application to  
spacecraft cabins  
[NASA-CASE-XLA-01243] c33 N71-22792
- Nonflammable coating compositions --- for use in  
high oxygen environments  
[NASA-CASE-MFS-20486-2] c27 N74-17283
- Regenerable device for scrubbing breathable air  
of CO2 and moisture without special heat  
exchanger equipment  
[NASA-CASE-MSC-14771-1] c54 N77-32722
- SPACECRAFT COMMUNICATION**
- Synchronizing apparatus for multi-access  
satellite time division multiplex system  
[NASA-CASE-XGS-05918] c07 N69-39974
- Phase shift data transmission system with  
pseudo-noise synchronization code modulated  
with digital data into single channel for  
spacecraft communication  
[NASA-CASE-XNP-00911] c08 N70-41961
- Design and development of tracking receiver for  
tracking satellites and receiving radio signal  
transmissions under adverse noise conditions  
[NASA-CASE-XGS-08679] c10 N71-21473
- Microwave omnidirectional antenna for use on  
spacecraft  
[NASA-CASE-XLA-03114] c09 N71-22888
- VHF/UHF parasitic probe antenna for spacecraft  
communication  
[NASA-CASE-XKS-09340] c07 N71-24614
- System designed to reduce time required for  
obtaining synchronization in data  
communication with spacecraft utilizing  
pseudonoise codes  
[NASA-CASE-NPO-10214] c10 N71-26577
- Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c32 N74-20864



- Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c33 N76-27472
- Antenna feed system for receiving circular  
polarization and transmitting linear  
polarization  
[NASA-CASE-NPO-14362-1] c32 N80-16261
- Common data buffer system --- communication with  
computational equipment utilized in spacecraft  
operations  
[NASA-CASE-KSC-11048-1] c62 N81-24779
- Apparatus and method for determining the  
position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c32 N81-27341
- SPACECRAFT COMPONENTS**
- Rectangular electric conductors for conductor  
cables to withstand spacecraft vibration and  
controlled atmosphere  
[NASA-CASE-MPS-14741] c09 N70-20737
- Vibration damping system operating in low vacuum  
environment for spacecraft mechanisms  
[NASA-CASE-XMS-01620] c23 N71-15673
- Intermittent type silica gel adsorption  
refrigerator for providing temperature control  
for spacecraft components  
[NASA-CASE-XNP-00920] c15 N71-15906
- Omnidirectional anisotropic molecular trap, used  
with vacuum pump to simulate space  
environments for testing spacecraft components  
[NASA-CASE-XGS-00783] c30 N71-17788
- Spacecraft air lock system to provide ingress  
and egress of astronaut without subjecting  
vehicular environment to vacuum of space  
[NASA-CASE-XLA-02050] c31 N71-22968
- Development and characteristics of docking  
structure and apparatus for spacecraft docking  
[NASA-CASE-XMS-05941] c31 N71-23912
- Design and development of release mechanism for  
spacecraft components, releasable despin  
weights, and extensible gravity locus  
[NASA-CASE-XGS-06718] c15 N71-24600
- Space environment simulator for testing  
spacecraft components under aerospace conditions  
[NASA-CASE-NPO-10141] c11 N71-24964
- Design and development of spacecraft with outer  
shell structure heat shielding and built-in,  
removable excursion module  
[NASA-CASE-MSC-13047-1] c31 N71-25434
- Electronic detection system for peak  
acceleration limits in vibrational testing of  
spacecraft components  
[NASA-CASE-NPO-10556] c14 N71-27185
- Development of solid state polymer coating for  
obtaining thermal balance in spacecraft  
components  
[NASA-CASE-XLA-01745] c33 N71-28903
- Development of apparatus for mounting scientific  
experiments in spacecraft to permit  
utilization without maneuvering spacecraft  
[NASA-CASE-MSC-12372-1] c31 N72-25842
- Airlock  
[NASA-CASE-MPS-20922-1] c18 N74-22136
- Thrust-isolating mounting --- characteristics of  
support for loads mounted in spacecraft  
[NASA-CASE-MPS-21680-1] c18 N74-27397
- Variable ratio mixed-mode bilateral master-slave  
control system for shuttle remote manipulator  
system  
[NASA-CASE-MSC-14245-1] c18 N75-27041
- SPACECRAFT CONFIGURATIONS**
- Inflatable honeycomb panel element for  
lightweight structures usable in space  
stations and other construction  
[NASA-CASE-XLA-00204] c32 N70-36536
- Lenticular vehicle with foldable aerodynamic  
control flaps and reaction jets for operation  
above and within earth's atmosphere  
[NASA-CASE-XGS-00260] c31 N70-37924
- Stage separation system for spinning vehicles  
and payloads  
[NASA-CASE-XLA-02132] c31 N71-10582
- Spacecraft configurations and aerodynamic  
characteristics of space shuttle systems with  
two reusable stages  
[NASA-CASE-MSC-12433] c31 N73-14854
- Space vehicle  
[NASA-CASE-MPS-22734-1] c18 N75-19329
- SPACECRAFT CONSTRUCTION MATERIALS**
- Pressurized cell micrometeoroid detector  
[NASA-CASE-XLA-00936] c14 N71-14996
- Flexible barrier membrane comprising porous  
substrate and incorporating liquid gallium or  
indium metal used as sealant barriers for  
spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747
- Method of making a composite sandwich lattice  
structure  
[NASA-CASE-LAE-11898-2] c24 N78-17149
- SPACECRAFT CONTROL**
- Light sensitive digital aspect sensor for  
attitude control of earth satellites or space  
probes  
[NASA-CASE-XGS-00359] c14 N70-34158
- Spacecraft attitude control system using solar  
and earth sensors, gyroscopes, and jet actuators  
[NASA-CASE-XNP-00465] c21 N70-35395
- Multiple parachute system for landing control of  
Apollo type spacecraft  
[NASA-CASE-XLA-00898] c02 N70-36804
- Attitude control device for space vehicles  
[NASA-CASE-XNP-00294] c21 N70-36938
- Attitude orientation control of spin stabilized  
final stage space vehicles, using horizon  
scanners  
[NASA-CASE-XLA-00281] c21 N70-36943
- Aerodynamic configuration of reentry vehicle  
heat shield to provide longitudinal and  
directional stability at hypersonic velocities  
[NASA-CASE-XMS-04142] c31 N70-41631
- Star sensor system for roll attitude control of  
spacecraft  
[NASA-CASE-XNP-01307] c21 N70-41856
- Photomultiplier detector of Canopus for  
spacecraft attitude control  
[NASA-CASE-XNP-03914] c21 N71-10771
- Development of spacecraft experiment pointing  
and attitude control system  
[NASA-CASE-XLA-05464] c21 N71-14132
- Development of attitude control system for  
spacecraft orientation  
[NASA-CASE-XGS-04393] c21 N71-14159
- Drive mechanism for operating reactance attitude  
control system for aerospace bodies  
[NASA-CASE-XMP-01598] c21 N71-15583
- Attitude detection system using stellar  
references for three-axis control and spin  
stabilized spacecraft  
[NASA-CASE-XGS-03431] c21 N71-15642
- Large amplitude, linear inertial reference  
system of vibrating string type for spacecraft  
reference plane  
[NASA-CASE-XAC-03107] c23 N71-16098
- Construction and method of arranging plurality  
of ion engines to form cluster thereby  
increasing efficiency and control by  
decreasing heat radiated to space  
[NASA-CASE-XNP-02923] c28 N71-23081
- Ion beam deflector system for electronic thrust  
vector control for ion propulsion yaw, pitch,  
and roll forces  
[NASA-CASE-LEW-10689-1] c28 N71-26173
- Heated porous plug microthrustor for spacecraft  
reaction jet controlled systems such as fuel  
flow regulation, propellant disassociation,  
and heat transfer augmentation  
[NASA-CASE-GSC-10640-1] c28 N72-18766
- Development of thrust control system for  
application to control of aircraft and  
spacecraft  
[NASA-CASE-MSC-13397-1] c21 N72-25595
- All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c35 N77-20399
- SPACECRAFT DESIGN**
- Lunar landing flight research vehicle  
[NASA-CASE-XFR-00929] c31 N70-34966
- Design and configuration of manned space capsule  
[NASA-CASE-XLA-01332] c31 N71-15664
- Development of spacecraft radiator cover  
[NASA-CASE-MSC-12049] c31 N71-16080
- Method and apparatus for connecting two  
spacecraft with probe of one inserted in  
rocket engine nozzle of other spacecraft  
[NASA-CASE-MPS-11133] c31 N71-16222
- Development and characteristics of protective  
coatings for spacecraft  
[NASA-CASE-XNP-02507] c31 N71-17679
- Development and characteristics of self  
supporting space vehicle  
[NASA-CASE-XLA-00117] c31 N71-17680



- Multi-mission space vehicle module stage design  
[NASA-CASE-XMF-01543] c31 N71-17730
- Development and characteristics of docking  
structure and apparatus for spacecraft docking  
[NASA-CASE-XMF-05941] c31 N71-23912
- Design and development of spacecraft with outer  
shell structure heat shielding and built-in,  
removable excursion module  
[NASA-CASE-MSC-13047-1] c31 N71-25434
- Spacecraft design with single point aerodynamic  
and hydrodynamic stability for emergency  
transport of men from space station to  
splashdown  
[NASA-CASE-MSC-13281] c31 N72-16859
- Space vehicle  
[NASA-CASE-MFS-22734-1] c18 N75-19329
- Space vehicle system  
[NASA-CASE-MSC-12561-1] c18 N76-17185
- Method and apparatus for neutralizing potentials  
induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c33 N77-10429
- SPACECRAFT DOCKING**
- Probe and drogue assembly for mechanical linking  
of two space vehicles  
[NASA-CASE-XMS-03613] c31 N71-16346
- Development and characteristics of docking  
structure and apparatus for spacecraft docking  
[NASA-CASE-XMF-05941] c31 N71-23912
- Latch for fastening spacecraft docking rings  
[NASA-CASE-MSC-15474-1] c15 N71-26162
- High energy absorption docking system design for  
docking large spacecraft  
[NASA-CASE-MFS-20863] c31 N73-26676
- Latch mechanism  
[NASA-CASE-MSC-12549-1] c37 N74-27903
- Spacecraft docking and alignment system ---  
using television camera system  
[NASA-CASE-MSC-12559-1] c18 N76-14186
- Multiple in-line docking capability for rotating  
space stations  
[NASA-CASE-MFS-20855-1] c15 N77-10112
- Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c37 N77-23483
- Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c18 N81-24164
- Terminal guidance sensor system --- space  
shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c37 N81-27519
- SPACECRAFT ELECTRONIC EQUIPMENT**
- Equipment for testing of ground station ranging  
equipment and spacecraft transponders  
[NASA-CASE-XMS-05454-1] c07 N71-12391
- Describing apparatus used in vacuum deposition  
of thin film inductive windings for spacecraft  
microcircuitry  
[NASA-CASE-XMF-01667] c15 N71-17647
- Nose cone mounted heat resistant antenna  
comprising plurality of adjacent layers of  
silica not introducing paths of high thermal  
conductivity through ablative shield  
[NASA-CASE-XMS-04312] c07 N71-22984
- SPACECRAFT ENVIRONMENTS**
- Portable environmental control and life support  
system for astronaut in and out of spacecraft  
[NASA-CASE-XMS-09632-1] c05 N71-11203
- Quick disconnect latch and handle combination  
for mounting articles on walls or supporting  
bases in spacecraft under zero gravity  
conditions  
[NASA-CASE-MFS-11132] c15 N71-17649
- Dual solid cryogens for spacecraft refrigeration  
insuring low temperature cooling for extended  
periods  
[NASA-CASE-GSC-10188-1] c23 N71-24725
- Dual stage check valve for cryogenic supply  
systems used in space flight environmental  
control system  
[NASA-CASE-MSC-13587-1] c15 N73-30459
- Metering gun for dispensing precisely measured  
charges of fluid  
[NASA-CASE-MFS-21163-1] c54 N74-17853
- SPACECRAFT GUIDANCE**
- Automatic ejection valve for attitude control  
and midcourse guidance of space vehicles  
[NASA-CASE-XNP-00676] c15 N70-38996
- Electrical and electromechanical trigonometric  
computation assembly and space vehicle  
guidance system for aligning perpendicular  
axes of two sets of three-axes coordinate  
references  
[NASA-CASE-XMF-00684] c21 N71-21688
- Design and characteristics of device for sensing  
solar radiation and providing spacecraft  
attitude control to maintain direction with  
respect to incident radiation  
[NASA-CASE-XNP-05535] c14 N71-23040
- Inertial gimbal alignment system for spacecraft  
guidance  
[NASA-CASE-XMF-01669] c21 N71-23289
- Hermetically sealed vibration damper design for  
use in gimbal assembly of spacecraft inertial  
guidance system  
[NASA-CASE-MSC-10959] c15 N71-26243
- SPACECRAFT INSTRUMENTS**
- Mechanical coordinate converter for use with  
spacecraft tracking antennas  
[NASA-CASE-XMF-00614] c14 N70-36907
- Air bearings for spacecraft gyros  
[NASA-CASE-XMF-00339] c15 N70-39896
- Unfolding boom assembly with knuckle joints for  
positioning equipment for spacecraft  
[NASA-CASE-XGS-00938] c32 N70-41367
- Pressurized cell micrometeoroid detector  
[NASA-CASE-XLA-00936] c14 N71-14996
- Guidance analyzer having suspended spacecraft  
simulating sphere for astronavigation  
[NASA-CASE-XNP-09572] c14 N71-15621
- Inertial component clamping assembly design for  
spacecraft guidance and control system mounting  
[NASA-CASE-XMS-02184] c15 N71-20813
- Optical projector system for establishing  
optimum arrangement of instrument displays in  
aircraft, spacecraft, other vehicles, and  
industrial instrument consoles  
[NASA-CASE-XNP-03853] c23 N71-21882
- Combined optical attitude and altitude  
indicating instrument for use in aircraft or  
spacecraft  
[NASA-CASE-XLA-01907] c14 N71-23268
- Spacecraft transponder and ground station radar  
system for mapping planetary surfaces  
[NASA-CASE-NFO-11001] c07 N72-21118
- Method and apparatus for providing active  
attitude control for spacecraft by converting  
any attitude motion of vehicle into simple  
rotational motion  
[NASA-CASE-HQN-10439] c21 N72-21624
- Design and development of thermomechanical pump  
for transmitting warming fluid through fluid  
circuit to control temperature of spacecraft  
instrumentation  
[NASA-CASE-NPC-11417] c15 N73-24513
- Deployable pressurized cell structure for a  
micrometeoroid detector  
[NASA-CASE-LAB-10295-1] c35 N74-21062
- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c35 N80-18359
- Real-time multiple-look synthetic aperture radar  
processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c32 N82-12297
- SPACECRAFT LANDING**
- Non-reusable kinetic energy absorber for  
application in soft landing of space vehicles  
[NASA-CASE-XLF-00810] c15 N70-34861
- Plastic foam generator for space vehicle  
instrument payload package flotation in water  
landing  
[NASA-CASE-XLA-00838] c03 N70-36778
- Device for use in descending spacecraft as  
altitude sensor for actuating deceleration  
retro-rockets  
[NASA-CASE-XMS-03792] c14 N70-41812
- SPACECRAFT LAUNCHING**
- Three stage motion restraining mechanism for  
restraining and damping three dimensional  
vibrational movement of gimballed package  
during launch of spacecraft  
[NASA-CASE-GSC-10306-1] c15 N71-24694
- Development and characteristics of squib  
actuated explosive disconnect for spacecraft  
release from launch vehicle  
[NASA-CASE-NPO-11330] c33 N73-26958
- SPACECRAFT MODELS**
- Space environment simulation system for  
measuring spacecraft electric field strength  
in plasma sheath  
[NASA-CASE-XLE-02038] c09 N71-16086

## SPACECRAFT MODULES

- Radial module manned space station with artificial gravity environment  
[NASA-CASE-XMS-01906] c31 N70-41373
- Multi-mission space vehicle module stage design  
[NASA-CASE-XMF-01543] c31 N71-17730
- Design and development of spacecraft with outer shell structure heat shielding and built-in, removable excursion module  
[NASA-CASE-MSC-13047-1] c31 N71-25434
- Development and characteristics of thermal control system for maintaining constant temperature within spacecraft module with wide variations of component heat transfer  
[NASA-CASE-GSC-11018-1] c31 N73-30829

## SPACECRAFT MOTION

- Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c35 N79-26372

## SPACECRAFT POSITION INDICATORS

- Device for determining relative angular position of spacecraft and radiating celestial body  
[NASA-CASE-GSC-11444-1] c14 N73-28490
- Spacecraft attitude sensing system design with narrow field of view sensor rotating about spacecraft x-y axis  
[NASA-CASE-GSC-10890-1] c21 N73-30640

## SPACECRAFT POWER SUPPLIES

- Spacecraft battery seals  
[NASA-CASE-XGS-03864] c15 N69-24320
- Electrical power system for space flight vehicles operating over extended periods  
[NASA-CASE-XMF-00517] c03 N70-34157
- Lightweight, rugged, inexpensive satellite battery for producing electrical power from ionosphere using electrodes with different contact potentials  
[NASA-CASE-XGS-01593] c03 N70-35408
- Design and development of electric generator for space power system  
[NASA-CASE-XLE-04250] c09 N71-20446
- Monostable multivibrator for conserving power in spacecraft systems  
[NASA-CASE-GSC-10082-1] c10 N72-20221
- Rectangular solar cell stacked panels to generate electrical power aboard spacecraft  
[NASA-CASE-NPO-11771] c03 N73-20040
- Thermoelectric power system --- for spacecraft  
[NASA-CASE-MFS-22002-1] c44 N76-16612
- Solar energy power system  
[NASA-CASE-MFS-21628-2] c44 N76-23675
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c33 N79-24254
- Solar driven liquid metal BHD power generator  
[NASA-CASE-LAR-12495-1] c44 N81-32609

## SPACECRAFT PROPULSION

- Colloidal particle generator for electrostatic engine for propelling space vehicles  
[NASA-CASE-XLE-00817] c28 N70-33265
- Spacecraft trajectory correction propulsion system  
[NASA-CASE-XNP-01104] c28 N70-39931
- Permanently magnetized ion engine casing construction for use in spacecraft propulsion systems  
[NASA-CASE-XNP-06942] c28 N71-23293
- Development of voice operated controller for controlling reaction jets of spacecraft  
[NASA-CASE-XLA-04063] c31 N71-33160
- Solid propellant motor  
[NASA-CASE-NPO-11458A] c20 N78-32179
- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c12 N79-26075
- Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c37 N81-15364

## SPACECRAFT RADIATORS

- Thermal control canister  
[NASA-CASE-GSC-12253-1] c34 N79-31523

## SPACECRAFT RECOVERY

- Assembly for opening flight capsule stabilizing and decelerating flaps with reference to capsule recovery  
[NASA-CASE-XMF-00641] c31 N70-36410
- Method for deployment of flexible wing glider from space vehicle with minimum impact and loading  
[NASA-CASE-XMS-00907] c02 N70-41630

## Satellite retrieval system

- [NASA-CASE-MFS-25403-1] c18 N81-24164

## SPACECRAFT REENTRY

- Manned space capsule configuration for orbital flight and atmospheric reentry  
[NASA-CASE-XLA-00149] c31 N70-37938
- Event recorder with constant speed motor which rotates recording disk  
[NASA-CASE-XLA-01832] c14 N71-21006

## SPACECRAFT SHIELDING

- Development and characteristics of protective coatings for spacecraft  
[NASA-CASE-XNP-02507] c31 N71-17679
- Double-wall isothermal cylinder containing heat transfer fluid thermal reservoir as spacecraft insulation cover  
[NASA-CASE-MFS-20355] c33 N71-25353
- Binder stabilized zinc oxide pigmented coating for spacecraft thermal control  
[NASA-CASE-XMF-07770-2] c18 N71-26772
- Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c24 N79-14156
- Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c24 N79-25142
- Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c37 N81-15363

## SPACECRAFT STABILITY

- Satellite stabilization reaction wheel scanner  
[NASA-CASE-XGS-02629] c14 N71-21082
- Attitude sensor  
[NASA-CASE-LAR-10586-1] c19 N74-15089
- Annular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c15 N76-14158
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c15 N78-25119
- Active nutation controller  
[NASA-CASE-GSC-12273-1] c35 N80-21719
- Method of and apparatus for damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c18 N81-12156

## SPACECRAFT STRUCTURES

- Collapsible, space erectable loop antenna system for space vehicle  
[NASA-CASE-XMF-00437] c07 N70-40202
- Electro-optical system for maintaining two-axis alignment during milling operations on large tank-sections  
[NASA-CASE-XMF-00908] c14 N70-40238
- Development of spacecraft radiator cover  
[NASA-CASE-MSC-12049] c31 N71-16080
- Design and construction of satellite appendage tie-down cord  
[NASA-CASE-XGS-02554] c31 N71-21064
- Development and characteristics of thermal sensitive panel for controlling ratio of solar absorptivity to surface emissivity for space vehicle temperature control  
[NASA-CASE-XLA-07728] c33 N71-22890
- Space expandable tether device for use as passageway between two docked spacecraft  
[NASA-CASE-XMS-10993] c15 N71-28936
- Delayed simultaneous appendage release mechanism for use on spacecraft equipped with despin mechanisms and releasable components  
[NASA-CASE-GSC-10814-1] c03 N73-20039
- Pressurized panel meteoroid detector  
[NASA-CASE-XLA-08916-2] c14 N73-28487
- Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c34 N75-12222
- Auger attachment method for insulation --- of spacecraft  
[NASA-CASE-MSC-12615-1] c37 N76-19437
- Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c34 N77-18382
- Diced tile thermal protection for spacecraft  
[NASA-CASE-MSC-16366-1] c24 N79-23142
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c54 N81-26718

## SPACECRAFT TELEVISION

- Electrically operated rotary shutter for television camera aboard spacecraft  
[NASA-CASE-XNP-00637] c14 N70-40273

- Conversion system for transforming slow scan rate of Apcllo TV camera on moon to fast scan of commercial TV  
[NASA-CASE-XMS-07168] c07 N71-11300
- Optical conversion method --- for spacecraft television  
[NASA-CASE-MSC-12618-1] c74 N78-17865
- SPACECRAFT TRACKING**
- Spacecraft ranging system  
[NASA-CASE-NPO-10066] c09 N71-18598
- Elimination of tracking occultation problems occurring during continuous monitoring of interplanetary missions by using Earth orbiting communications satellite  
[NASA-CASE-XAC-06029-1] c31 N71-24813
- Tracking mount for laser telescope employed in tracking large rockets and space vehicles to give information regarding azimuth and elevation  
[NASA-CASE-MFS-14017] c14 N71-26627
- Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c19 N74-21015
- Conical scan tracking system employing a large antenna  
[NASA-CASE-NFO-14009-1] c32 N79-13214
- SPACECREWS**
- Development and characteristics of inflatable structure to provide escape from orbit for spacecrews under emergency conditions  
[NASA-CASE-XMS-06162] c31 N71-28851
- SPALLATION**
- Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LFW-11390-2] c25 N76-27383
- SPARK GAPS**
- Spark gap type protective circuit for fast sensing and removal of overvoltage conditions  
[NASA-CASE-XAC-08981] c09 N69-39897
- Mechanism for measuring nanosecond time differences between luminous events using streak camera  
[NASA-CASE-XLA-01987] c23 N71-23976
- SPARK IGNITION**
- High temperature spark plug for igniting liquid rocket propellants  
[NASA-CASE-XLE-00660] c28 N70-39925
- Plasma igniter for internal combustion engine  
[NASA-CASE-NFO-13828-1] c37 N79-11405
- SPARK PLUGS**
- High temperature spark plug for igniting liquid rocket propellants  
[NASA-CASE-XLE-00660] c28 N70-39925
- SPATIAL DISTRIBUTION**
- Electronic recording system for spatial mass distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NPO-10185] c10 N71-26339
- SPATIAL FILTERING**
- Spatial filter for Q-switched lasers  
[NASA-CASE-LFW-12164-1] c36 N77-32478
- SPECIMENS**
- Fixture for environmental exposure of structural materials under compression  
[NASA-CASE-LAR-12602-1] c35 N81-19429
- SPECTRAL REFLECTANCE**
- Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c35 N74-23040
- SPECTRAL SIGNATURES**
- Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c43 N79-17288
- SPECTROMETERS**
- Spectrometer using photoelectric effect to obtain spectral data  
[NASA-CASE-XNF-04161] c14 N71-15599
- Variable frequency nuclear magnetic resonance spectrometer providing drive signals over wide frequency range and minimizing noise effects  
[NASA-CASE-XNP-09830] c14 N71-26266
- Maksutov spectrograph for low light level research  
[NASA-CASE-XLA-10402] c14 N71-29041
- Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c14 N73-28491
- Design of gamma ray spectrometer for measurement of intense radiation using Compton scattering effect  
[NASA-CASE-MFS-21441-1] c14 N73-30392
- Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c35 N74-15091
- Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c35 N74-23040
- Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c35 N75-19613
- Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c33 N75-26245
- Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NFC-13479-1] c35 N77-10492
- Frequency-scanning particle size spectrometer  
[NASA-CASE-NFO-13606-2] c35 N80-18364
- Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c35 N80-20563
- Visible and infrared polarization ratio spectrophotometer  
[NASA-CASE-LAR-12285-1] c35 N80-28687
- SPECTROPHOTOMETERS**
- Spectrophotofluorometer with 3-dimensional display to identify fluorescence spectra of carcinogenic and noncarcinogenic hydrocarbons  
[NASA-CASE-XGS-01231] c14 N70-41676
- High resolution Fourier interferometer-spectrophotopolarimeter  
[NASA-CASE-NFO-13604-1] c35 N76-31490
- Differential optoacoustic absorption detector  
[NASA-CASE-NFC-13759-1] c74 N78-17867
- SPECTRORADIOMETERS**
- Development and characteristics of spectroradiometer with wedge filters to eliminate adverse effect of pinholes in filters  
[NASA-CASE-HQN-10683] c14 N71-34389
- SPECTROSCOPIC ANALYSIS**
- Cylindrical reflector for resolving wide angle light beam from telescope into narrow beam for spectroscopic analysis  
[NASA-CASE-XGS-08269] c23 N71-26206
- SPECTRUM ANALYSIS**
- Spectrometer using photoelectric effect to obtain spectral data  
[NASA-CASE-XNF-04161] c14 N71-15599
- Emission spectroscopy method for contamination monitoring of inert gas metal arc welding  
[NASA-CASE-XMF-02039] c15 N71-15871
- Method and apparatus for high resolution power spectrum analysis  
[NASA-CASE-NFC-10748] c08 N72-20177
- Frequency tracked pulse technique for ultrasonic analysis  
[NASA-CASE-LAR-12697-1] c32 N80-26571
- Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c25 N81-14015
- SPECULAR REFLECTION**
- Real time reflectometer --- measurement of specular reflectance  
[NASA-CASE-MFS-23118-1] c35 N77-31465
- SPEECH RECOGNITION**
- Speech analyzer  
[NASA-CASE-GSC-11898-1] c32 N77-30309
- SPEED CONTROL**
- System for maintaining motor at predetermined speed using digital pulses  
[NASA-CASE-XMF-06892] c09 N71-24805
- Optimal control system for automatic speed regulation of electric driven motor vehicle  
[NASA-CASE-NPO-11210] c11 N72-20244
- Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel  
[NASA-CASE-MFS-20645-1] c37 N74-23070
- Low speed phaselock speed control system --- for brushless dc motor  
[NASA-CASE-GSC-11127-1] c09 N75-24758
- Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NFO-14170-1] c37 N81-15364
- Variable speed drive  
[NASA-CASE-GSC-12643-1] c37 N81-24447
- SPEED REGULATORS**
- Feedback control for direct current motor to achieve constant speed under varying loads

- [NASA-CASE-MFS-14610] c09 N71-28886
- SPHERES**
- Guidance analyzer having suspended spacecraft  
simulating sphere for astronavigation  
[NASA-CASE-XMP-09572] c14 N71-15621
- Plastic sphere for radar tracking and calibration  
[NASA-CASE-XLA-11154] c07 N72-21117
- SPHERICAL SHELLS**
- Hollow spherical electrode for shielding  
dielectric junction between high voltage  
conductor and insulator  
[NASA-CASE-XLE-03778] c09 N69-21542
- Development of mechanical device for measuring  
distance of point within sphere from surface  
of sphere  
[NASA-CASE-XLA-06683] c14 N72-28436
- SPHERICAL TANKS**
- Gauge for measuring quantity of liquid in  
spherical tank in reduced gravity  
[NASA-CASE-XMS-06236] c14 N71-21007
- SPHERICAL WAVES**
- Electrical device for developing converging  
spherical shock waves  
[NASA-CASE-MFS-20890] c14 N72-22439
- SPHYGMOGRAPHY**
- Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c52 N82-11770
- SPIKE NOZZLES**
- Constructing fluid spike nozzle to eliminate  
heat transfer and high temperature problems  
inherent in physical spikes  
[NASA-CASE-XGS-01143] c31 N71-15647
- SPIKE POTENTIALS**
- Elimination of current spikes in buck power  
converters  
[NASA-CASE-NPO-14505-1] c33 N81-19393
- SPIN DYNAMICS**
- Nutation damper for use on spinning body  
[NASA-CASE-GSC-11205-1] c15 N73-25513
- Stabilization of He2(a 3 Sigma +) molecules in  
liquid helium by optical pumping for vacuum UV  
laser 6  
[NASA-CASE-NPO-13993-1] c72 N79-13826
- SPIN REDUCTION**
- Optical scanner mounted on rotating support  
structure with method of compensating for  
image or satellite rotation  
[NASA-CASE-XGS-02401] c14 N69-27485
- Bolt-latch mechanism for releasing despin  
weights from space vehicle  
[NASA-CASE-XLA-00679] c15 N70-38601
- Stretch Yo-Yo mechanism for reducing initial  
spin rate of space vehicle  
[NASA-CASE-XGS-00619] c30 N70-40016
- Stage separation system for spinning vehicles  
and payloads  
[NASA-CASE-XLA-02132] c31 N71-10582
- Flexible turnstile antenna system for reducing  
nutation in spin-oriented satellites  
[NASA-CASE-XMF-00442] c31 N71-10747
- SPIN STABILIZATION**
- Dynamic precession damping of spin-stabilized  
vehicles by using rate gyroscope and angular  
accelerometer  
[NASA-CASE-XLA-01989] c21 N70-34295
- Attitude orientation control of spin stabilized  
final stage space vehicles, using horizon  
scanners  
[NASA-CASE-XLA-00281] c21 N70-36943
- Attitude detection system using stellar  
references for three-axis control and spin  
stabilized spacecraft  
[NASA-CASE-XGS-03431] c21 N71-15642
- Spin phase synchronization of cartwheel  
satellite in polar orbit  
[NASA-CASE-XGS-05579] c31 N71-15676
- High velocity guidance and spin stabilization  
gyro controlled jet reaction system for launch  
vehicle payloads  
[NASA-CASE-XLA-01339] c31 N71-15692
- Passive dual spin misalignment compensators ---  
gyrostabilized device  
[NASA-CASE-GSC-11479-1] c35 N74-28097
- Deployable flexible ventral fins for use as an  
emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c08 N74-30421
- Active nutation controller  
[NASA-CASE-GSC-12273-1] c35 N80-21719
- Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c08 N81-19130
- Scanner --- photography from a spin stabilized  
synchronous satellite  
[NASA-CASE-GSC-12032-2] c43 N82-13465
- SPINDLES**
- Variable contour securing system  
[NASA-CASE-MSC-16270-1] c37 N78-27423
- SPINE**
- Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c52 N81-25662
- SPINNERS**
- Head for high speed spinner having a vacuum chuck  
--- holding silicon dioxide chips for etching  
[NASA-CASE-MFC-15227-1] c37 N81-33482
- SPIRAL ANTENNAS**
- Complementary cross-slot phased array antenna  
[NASA-CASE-MSC-18532-1] c32 N80-29543
- SPIRAL WRAPPING**
- Adjustable spiral wire winding device  
[NASA-CASE-XMS-02383] c15 N71-15918
- Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c37 N81-12422
- SPIRALS (CONCENTRATORS)**
- Spiral groove seal --- for hydraulic rotating  
shaft  
[NASA-CASE-LEW-10326-3] c37 N74-10474
- SPIROMETERS**
- Compact bellows spirometer for high speed and  
high altitude space travel  
[NASA-CASE-XAR-01547] c05 N69-21473
- SPLINTS**
- Stretcher with rigid head and neck support with  
capability of supporting immobilized person in  
vertical position for removal from vehicle  
hatch to exterior also useful as splint  
stretcher  
[NASA-CASE-XMF-06589] c05 N71-23159
- SPORES**
- Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c37 N74-13178
- SPOT WELDS**
- Controlled arc spot welding method  
[NASA-CASE-XMF-00392] c15 N70-34814
- Automatic closed circuit television arc guidance  
control for welding joints  
[NASA-CASE-MFS-13046] c07 N71-19433
- SPRAY NOZZLES**
- Rocket injector head  
[NASA-CASE-XMF-04592-1] c20 N79-21125
- Fire extinguishing apparatus having a slidable  
mass for a penetrator nozzle --- for  
penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c31 N81-14137
- Controlled overspray spray nozzle  
[NASA-CASE-MFS-25139-1] c34 N82-13376
- SPRAYED COATINGS**
- Plasma spraying gun for forming diffusion bonded  
metal or ceramic coatings on substrates  
[NASA-CASE-XLF-01604-2] c15 N71-15610
- Production and application of sprayable fiber  
reinforced ablation material  
[NASA-CASE-XLA-04251] c18 N71-26100
- Metal plating process employing spraying of  
metallic power/peening particle mixture  
[NASA-CASE-GSC-11163-1] c15 N73-32360
- Sprayable low density ablator and application  
process  
[NASA-CASE-MFS-23506-1] c24 N78-24290
- Thermal barrier coating system having improved  
adhesion  
[NASA-CASE-LEW-13359-1] c27 N81-24265
- SPRAYERS**
- External device for liquid spray cooling of gas  
turbine blades  
[NASA-CASE-XLF-00037] c28 N70-33372
- Adhesive spray process for attaching biomedical  
skin electrodes  
[NASA-CASE-XFR-07658-1] c05 N71-26293
- Apparatus for liquid spray cooling of turbine  
blades  
[NASA-CASE-XLF-00027] c33 N71-29152
- Closed loop spray cooling apparatus --- for  
particle accelerator targets  
[NASA-CASE-LEW-11981-1] c31 N78-17237
- SPRAYING**
- Aircraft wheel spray drag alleviator for dual  
tandem landing gear  
[NASA-CASE-XLA-01583] c02 N70-36825

- Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c34 N79-20336
- SPREADING**  
Tool attachment for spreading or moving away loose elements from terminal posts during winding of filamentary elements  
[NASA-CASE-XMF-02107] c15 N71-10809
- SPRINGS (ELASTIC)**  
Belleville spring assembly with elastic guides having low hysteresis  
[NASA-CASE-XNP-09452] c15 N69-27504  
Multiple Belleville spring assembly with even load distribution  
[NASA-CASE-XNP-00840] c15 N70-38225  
Switching mechanism with energy stored in coil spring  
[NASA-CASE-XGS-00473] c03 N70-36713  
Load cell protection device using spring-loaded breakaway mechanism  
[NASA-CASE-XMS-06782] c32 N71-15974  
Vibration isolation system, using coaxial helical compression springs  
[NASA-CASE-NPO-11012] c15 N72-11391  
Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c35 N77-18417  
Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c44 N80-29834  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c37 N81-22359
- SPUTTERING**  
Deposition method for epitaxial beta SiC films having high degree of crystallographic perfection  
[NASA-CASE-ERC-10120] c26 N69-33482  
Development of procedure for producing thin transparent films of zinc oxide on transparent refractory substrate  
[NASA-CASE-PRC-10019] c15 N73-12487  
Technique and equipment for sputtering using apertured electrode and pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c17 N73-24569  
Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c20 N74-31269  
Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c37 N75-19684  
Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N81-19455  
Ion sputter textured graphite --- applications to electron tube devices  
[NASA-CASE-LEW-12919-1] c24 N81-27198
- SQUARE WAVES**  
High speed phase detector design indicating phase relationship between two square wave input signals  
[NASA-CASE-XNP-01306-2] c09 N71-24596
- SQUARES (MATHEMATICS)**  
Apparatus for computing square roots  
[NASA-CASE-XGS-04768] c08 N71-19437
- SQUIBS**  
Contamination free separation nut eliminating combustion products from ambient surroundings generated by squib firing  
[NASA-CASE-XGS-01971] c15 N71-15922
- STABILITY AUGMENTATION**  
Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c08 N81-24106
- STABILITY TESTS**  
Method and apparatus for checking the stability of a setup for making reflection type holograms  
[NASA-CASE-MFS-21455-1] c35 N74-15146
- STABILIZATION**  
Electro-optical stabilization of calibrated light source  
[NASA-CASE-MSC-12293-1] c14 N72-27411  
System for controlling torque buildup in suspension of gondola connected to balloon by parachute shroud lines  
[NASA-CASE-GSC-11077-1] c02 N73-13008  
Development of aerodynamic control system to control flutter over large range of oscillatory frequencies using stability augmentation techniques  
[NASA-CASE-LAR-10682-1] c02 N73-26004  
Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c76 N75-25730
- Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c33 N77-22386  
Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c37 N81-24442
- STABILIZING PLATFORMS**  
Hydraulic drive mechanism for leveling isolation platforms  
[NASA-CASE-XMS-03252] c15 N71-10658  
Failure detection and control means for improved drift performance of a gimballed platform system  
[NASA-CASE-MFS-23551-1] c04 N76-26175  
Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c37 N78-27425
- STABILIZERS**  
Design and development of satellite despin device  
[NASA-CASE-XMF-08523] c31 N71-20396
- STABILIZERS (AGENTS)**  
Solid propellant stabilizer containing nitroguanidine  
[NASA-CASE-NPO-12000] c27 N72-25699
- STABILIZERS (FLUID DYNAMICS)**  
Assembly for opening flight capsule stabilizing and decelerating flaps with reference to capsule recovery  
[NASA-CASE-XMF-00641] c31 N70-36410  
Mechanical stabilization system for VTOL aircraft  
[NASA-CASE-XLA-06339] c02 N71-13422  
Attitude stabilizer for nonguided missile or vehicle with respect to trajectory  
[NASA-CASE-ARC-10134] c30 N72-17873  
Inflatable stabilizing system for use on life raft to reduce rocking and preclude capsizing  
[NASA-CASE-MSC-12393-1] c02 N73-26006  
Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c37 N76-14460
- STABLE OSCILLATIONS**  
Automatic measuring and recording of gain and zero drift characteristics of electronic amplifier  
[NASA-CASE-XMS-05562-1] c09 N69-39986
- STACKS**  
Remote fire stack igniter --- with solenoid-controlled valve  
[NASA-CASE-MFS-21675-1] c25 N74-33378
- STAGE SEPARATION**  
Stage separation using remote control release of joint with explosive insert  
[NASA-CASE-XLA-02854] c15 N69-27490  
Piezoelectric means for missile stage separation indication and stage initiation  
[NASA-CASE-XLA-00791] c03 N70-39930  
Space vehicle stage coupling and quick release separation mechanism  
[NASA-CASE-XLA-01441] c15 N70-41679  
Stage separation system for spinning vehicles and payloads  
[NASA-CASE-XLA-02132] c31 N71-10582  
Payload/spent rocket engine case separation system  
[NASA-CASE-XLA-05369] c31 N71-15687  
Separation mechanism for use between stages of multistage rocket vehicles  
[NASA-CASE-XLA-00188] c15 N71-22874  
Development of remotely controlled shaped charge for lateral displacement of rocket stages after separation  
[NASA-CASE-XLA-04804] c31 N71-23008  
Electrical circuit selection device for simulating stage separation of flight vehicle  
[NASA-CASE-XKS-04631] c10 N71-23663  
Frangible connecting link suitable for rocket stage separation  
[NASA-CASE-MSC-11849-1] c15 N72-22488
- STAGNATION PRESSURE**  
Flow meter for measuring stagnation pressure in boundary layer around high speed flight vehicle  
[NASA-CASE-XFR-02007] c12 N71-24692  
Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c35 N74-32878
- STAGNATION TEMPERATURE**  
Measuring conductive heat flow and thermal conductivity of laminar gas stream in cylindrical plug to simulate atmospheric reentry  
[NASA-CASE-XLE-00266] c14 N70-34156
- STAINING**  
Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c51 N77-27677

## STAINLESS STEELS

- Joining aluminum to stainless steel by bonding aluminum coatings onto titanium coated stainless steel and brazing aluminum to aluminum/titanium coated steel  
[NASA-CASE-MFS-07369] c15 N71-20443
- Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c38 N74-15130
- Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c34 N76-27515
- Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c24 N77-19171
- Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-1] c26 N80-19237

## STAMPING

- Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c37 N81-16470

## STANDARDS

- Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c33 N81-17348

## STANDING WAVES

- Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c71 N81-15767
- Systems for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c71 N82-11861

## STAR TRACKERS

- Star sensor system for roll attitude control of spacecraft  
[NASA-CASE-XNP-01307] c21 N70-41856
- Sun tracker with rotatable plane-parallel plate and two photocells  
[NASA-CASE-XGS-01159] c21 N71-10678
- Photomultiplier detector of Canopus for spacecraft attitude control  
[NASA-CASE-XNP-03914] c21 N71-10771
- Attitude detection system using stellar references for three-axis control and spin stabilized spacecraft  
[NASA-CASE-XGS-03431] c21 N71-15642
- Relay controlled voltage switching unit for scanning circuitry of star tracker  
[NASA-CASE-NPO-11253] c09 N72-17157
- Method for producing reticles for use in outer space  
[NASA-CASE-GSC-11188-2] c21 N73-19630
- Production method of star tracking reticles for transmitting in visible and near ultraviolet regions  
[NASA-CASE-GSC-11188-1] c14 N73-32320
- Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c74 N74-20008
- Star scanner --- with a reticle with a pair of slits having differing separation  
[NASA-CASE-GSC-11569-1] c89 N74-30886
- Programmable scan/read circuitry for charge coupled device imaging detectors --- for a startracker  
[NASA-CASE-NPO-15345-1] c33 N81-27403

## STARK EFFECT

- Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c33 N75-26245
- Stark-effect modulation of CO2 laser with NH2D  
[NASA-CASE-NPO-11945-1] c36 N76-18427
- Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c25 N81-14015
- Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c25 N81-25159

## STARTERS

- Starting circuit design for initiating and maintaining arcs in vapor lamps  
[NASA-CASE-XNP-01058] c09 N71-12540
- Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c33 N75-19524
- Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c33 N82-11360

## STARTING

- Portable device for use in starting air-start-units for aircraft and having cable lead testing capability

- [NASA-CASE-FRC-10113-1] c33 N80-26599
- STATIC FRICTION**  
Kinetic and static friction force measurement between magnetic tape and magnetic head surfaces  
[NASA-CASE-XNP-08680] c14 N71-22995
- Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c35 N76-31489
- STATIC INVERTERS**  
Describing static inverter with single or multiple phase output  
[NASA-CASE-XNF-00663] c08 N71-18752
- Development and characteristics of oscillating static inverter  
[NASA-CASE-XGS-05289] c09 N71-19470
- STATIC LOADS**  
Measuring shear-creep compliance of solid and liquid materials used in spacecraft components  
[NASA-CASE-XLE-01481] c14 N71-10781
- Apparatus for measuring load on cable under static or dynamic conditions comprising pulleys pivoting structure against restraint of tension strap  
[NASA-CASE-XNS-04545] c15 N71-22878
- STATIC PRESSURE**  
Pressure probe for sensing ambient static air pressures  
[NASA-CASE-XLA-00481] c14 N70-36824
- Ambient atmospheric pressure sensing device for determining altitude of flight vehicles  
[NASA-CASE-XLA-00128] c15 N70-37925
- Static pressure probe  
[NASA-CASE-LAR-11552-1] c35 N76-14429
- Static pressure orifice system testing method and apparatus  
[NASA-CASE-LAR-12269-1] c35 N80-18358
- STATIONKEEPING**  
Method of stationkeeping for lenticular gravity gradient satellites  
[NASA-CASE-XLA-03132] c31 N71-22969
- STATISTICAL CORRELATION**  
Optical sensing of supersonic flows by correlating deflections in laser beams through flow  
[NASA-CASE-MFS-20642] c14 N72-21407
- STATOR BLADES**  
Stator rotor tools  
[NASA-CASE-MSC-16000-1] c37 N78-24544
- STATORS**  
Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c26 N77-32280
- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c44 N80-29834
- STEADY STATE**  
Steady state thermal radiometers  
[NASA-CASE-MFS-21108-1] c34 N74-27861
- STEAM TURBINES**  
Vapor generating boiler system for turbine motor  
[NASA-CASE-XLE-00785] c33 N71-16104
- STEELS**  
Zinc dust formulation for abrasion resistant steel coatings  
[NASA-CASE-GSC-10361-1] c18 N72-23581
- STEERABLE ANTENNAS**  
Apparatus for generating microwave signals at progressively related phase angles for driving antenna array  
[NASA-CASE-ERC-10046] c10 N71-18722
- Satellite radio communication system with remote steerable antenna  
[NASA-CASE-XNP-02389] c07 N71-28900
- Amplitude steered array  
[NASA-CASE-GSC-11446-1] c33 N74-20860
- Phased array antenna control  
[NASA-CASE-MSC-14939-1] c32 N79-11264
- STEERING**  
Steerable solid propellant rocket motor adapted to effect payload orientation as multistage rocket stage or reduce velocity as retrorocket  
[NASA-CASE-XNP-00234] c28 N70-38645
- STELLAR LUMINOSITY**  
Development of star intensity measuring system which minimizes effects of outside interference  
[NASA-CASE-XNP-06510] c14 N71-23797
- STELLAR SPECTRA**  
Development of star intensity measuring system which minimizes effects of outside interference  
[NASA-CASE-XNP-06510] c14 N71-23797

STENCIL PROCESSES

Method for making patterns for resin matrix composites  
[NASA-CASE-ARC-11246-1] c24 N80-22410

STEPPING MOTORS

Scanner --- photography from a spin stabilized synchronous satellite  
[NASA-CASE-GSC-12032-2] c43 N82-13465

STEREOPHOTOGRAPHY

Stereo photomicrography system with stereo microscope for viewing specimen at various magnifications.  
[NASA-CASE-LAR-10176-1] c14 N72-20380

STEREOSCOPIC VISION

Stereoscopic television system, including projecting pair of binocular images  
[NASA-CASE-ARC-10160-1] c23 N72-27728

STERILIZATION

Using ethylene oxide in preparation of sterilized solid rocket propellants and encapsulating materials  
[NASA-CASE-XNP-01749] c27 N70-41897

Ethylene oxide sterilization and encapsulating process for sterile preservation of instruments and solid propellants  
[NASA-CASE-XNP-09763] c14 N71-20461

Environmentally controlled suit for working in sterile chamber  
[NASA-CASE-LAR-10076-1] c05 N73-20137

Protein sterilization of firefly luciferase without denaturation  
[NASA-CASE-GSC-10225-1] c06 N73-27086

Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c54 N75-27761

Portable heatable container  
[NASA-CASE-NPO-14237-1] c44 N80-20808

System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c54 N81-24724

STERILIZATION EFFECTS

Reliability of electrical connectors after heat sterilization  
[NASA-CASE-NPO-10694] c09 N72-20200

STIFFNESS

Modified face seal for positive film stiffness  
[NASA-CASE-LEN-12989-1] c37 N82-12442

STIMULATED EMISSION

Repetitively pulsed wavelength selective carbon dioxide laser  
[NASA-CASE-ERC-10178] c16 N71-24832

STIRLING CYCLE

Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c37 N76-29590

Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c37 N81-14318

Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14368-1] c37 N81-17432

Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c44 N81-17518

Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c37 N81-25370

Stirling cycle cryogenic cooler --- magnetically suspended pistons  
[NASA-CASE-GSC-12697-1] c31 N82-11312

STIRRING

Design of mechanical device for stirring several test tubes simultaneously  
[NASA-CASE-XAC-06956] c15 N71-21177

STORAGE

Design and development of fluid sample collector  
[NASA-CASE-XMS-06767-1] c14 N71-20435

Sodium storage and injection system  
[NASA-CASE-NPO-14364-1] c37 N80-10494

STORAGE BATTERIES

Leak resistant bonded elastomeric seal for secondary electrochemical cells  
[NASA-CASE-XGS-02631] c03 N71-23006

Automatically charging battery of electric storage cells  
[NASA-CASE-XNP-04758] c03 N71-24605

Elimination of two step voltage discharge property of silver zinc batteries by using divalent silver oxide capacity of cell to charge anodes to monovalent silver state  
[NASA-CASE-XGS-01674] c03 N71-29129

Electric storage battery with high impact resistance  
[NASA-CASE-NPO-11021] c03 N72-20032

Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c44 N76-18641

Rechargeable battery which combats shape change of the zinc anode  
[NASA-CASE-HQN-10862-1] c44 N76-29699

Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c44 N77-14581

Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c44 N79-17313

Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c44 N81-24521

STORAGE STABILITY

Storage stable, thermally activated foaming compositions for erecting and rigidizing mechanisms of thin sheet solar collectors  
[NASA-CASE-LAR-10373-1] c18 N71-26155

Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c52 N79-14749

Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c35 N82-11432

STORAGE TANKS

Expulsion bladder equipped storage tank structure  
[NASA-CASE-XNP-00612] c11 N70-38182

Development of apparatus and method for testing leakage of large tanks  
[NASA-CASE-XMF-02392] c32 N71-24285

Apparatus for aligning shadow shields and cryogenic storage tanks in outer space with the sun  
[NASA-CASE-KSC-10622-1] c31 N72-21893

Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c37 N80-18393

STRAIN GAGE ACCELEROMETERS

Accelerometer with FM output signals indicative of mechanical strain on it  
[NASA-CASE-XLA-00492] c14 N70-34799

Strain gage accelerometer for angular acceleration measurement  
[NASA-CASE-XMS-05936] c14 N70-41682

STRAIN GAGE BALANCES

Self-balancing strain gage transducer with bridge circuit  
[NASA-CASE-MFS-12827] c14 N71-17656

STRAIN GAGES

Semiconductor p-n junction on needle apex to provide stress and strain sensor  
[NASA-CASE-XLA-04980] c09 N69-27422

Apparatus for forming wire grids for electric strain gages  
[NASA-CASE-XLE-00023] c15 N70-33330

Force measuring instrument for structural members, particularly fastening bolts or studs  
[NASA-CASE-XMF-00456] c14 N70-34705

Strain gage for detecting and measuring mechanical strain in thermally strained specimens  
[NASA-CASE-FRC-10053] c14 N70-35587

Difference indicating circuit used in conjunction with device measuring gravitational fields  
[NASA-CASE-XNP-08274] c10 N71-13537

Water cooled gage for strain measurements in high temperature environments  
[NASA-CASE-XNP-09205] c14 N71-17657

Development of apparatus for measuring successive increments of strain on elastomers  
[NASA-CASE-XMF-04680] c15 N71-19489

Strain gage measurement of elongation due to thermally and mechanically induced stresses  
[NASA-CASE-XGS-04478] c14 N71-24233

Method for temperature compensating semiconductor gages by exposure to high energy radiation  
[NASA-CASE-XLA-04555-1] c14 N71-25892

Pulsed excitation voltage circuit for strain gage bridge transducers  
[NASA-CASE-FRC-10036] c09 N72-22200

Method for making semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980-2] c14 N72-28438

Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c35 N74-26945

Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c35 N75-12273

Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c33 N75-31329

Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c35 N75-33369

Strain gage mounting assembly  
[NASA-CASE-NFO-13170-1] c35 N76-14430

High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c35 N76-24523

Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c35 N77-14407

CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c39 N78-15512

Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c35 N80-20560

Pulsed phase locked loop strain monitor  
[NASA-CASE-LAR-12772-1] c33 N81-15195

Photomechanical transducer  
[NASA-CASE-NFO-14363-1] c39 N81-25400

**STRAIN RATE**  
Process for analysis of strain field of structures subjected to large deformations involving low modulus substrate with thin coating  
[NASA-CASE-LAR-10765-1] c32 N73-20740

**STRAPDOWN INERTIAL GUIDANCE**  
All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c35 N77-20399

**STRAPS**  
Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c35 N75-19615

Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c37 N80-18393

**STRATIFICATION**  
A stable density-stratification solar pond  
[NASA-CASE-NPO-15419-1] c44 N81-27599

**STRATIGRAPHY**  
System for plotting subsil structure and method therefor  
[NASA-CASE-NPO-14191-1] c31 N80-32584

**STREAMS**  
Apparatus for measuring a scrubate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c35 N78-19465

**STRESS ANALYSIS**  
Development of system for measuring damping characteristics of structure or system subjected to random forces or influences  
[NASA-CASE-ARC-10154-1] c14 N72-22440

Process for analysis of strain field of structures subjected to large deformations involving low modulus substrate with thin coating  
[NASA-CASE-LAR-10765-1] c32 N73-20740

High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c35 N76-24523

**STRESS CONCENTRATION**  
Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c35 N75-33369

**STRESS CORROSION**  
Method to prevent stress corrosion cracking in titanium alloys  
[NASA-CASE-NPO-10271] c17 N71-16393

Method and apparatus for inducing compressive stresses in pressure vessel to prevent stress corrosion  
[NASA-CASE-XLA-07390] c15 N71-18616

**STRESS MEASUREMENT**  
Semiconductor p-n junction on needle apex to provide stress and strain sensor  
[NASA-CASE-XLA-04980] c09 N69-27422

Force measuring instrument for structural members, particularly fastening bolts or studs  
[NASA-CASE-XMF-00456] c14 N70-34705

Self-balancing strain gage transducer with bridge circuit  
[NASA-CASE-MFS-12827] c14 N71-17656

Servocontrol system for measuring local stresses at geometric discontinuity in stressed material  
[NASA-CASE-XLA-08539] c32 N71-25360

Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c35 N77-22449

CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c39 N78-15512

**STRESS RELAXATION**  
Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c24 N81-17170

**STRESS RELIEVING**  
Nut and bolt fastener permitting all-directional movement of skin sections with respect to supporting structure  
[NASA-CASE-XLA-01807] c15 N71-10799

**STRESSES**  
Tape recorder designed for low power consumption and resistance to operational failure under high stress conditions  
[NASA-CASE-XGS-08259] c14 N71-23698

Strain gage measurement of elongation due to thermally and mechanically induced stresses  
[NASA-CASE-XGS-04478] c14 N71-24233

Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c27 N76-14264

Fixture for environmental exposure of structural materials under compression  
[NASA-CASE-LAR-12602-1] c35 N81-19429

**STRETCHERS**  
Development and characteristics of rescue litter with inflatable flotation device for water rescue application  
[NASA-CASE-XMS-04170] c05 N71-22748

Stretcher with rigid head and neck support with capability of supporting immobilized person in vertical position for removal from vehicle hatch to exterior also useful as splint stretcher  
[NASA-CASE-XMF-06589] c05 N71-23159

**STRETCHING**  
Device for securing together structural members with axially stretched bolt and nut  
[NASA-CASE-GSC-11149-1] c15 N73-30457

**STRINGERS**  
Universal connectors for joining stringers  
[NASA-CASE-LAR-12744-1] c37 N81-31551

**STRINGS**  
Cord restraint system for pressure suit joints  
[NASA-CASE-XMS-09635] c05 N71-24623

**STRIP TRANSMISSION LINES**  
Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c33 N81-17348

**STRUCTURAL ANALYSIS**  
Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c74 N77-10899

**STRUCTURAL DESIGN**  
Design of inflatable life raft for aircrafts and boats  
[NASA-CASE-XMS-00863] c05 N70-34857

Structural design of high pressure regulator valve  
[NASA-CASE-XNP-00710] c15 N71-10778

Graphic illustration of lifting body design  
[NASA-CASE-FRC-10063] c01 N71-12217

Design of ring wing vehicle of high drag-to-weight ratio to withstand reentry stress into low density atmosphere  
[NASA-CASE-XLA-04901] c31 N71-24315

Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366

Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c74 N77-28933

Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c44 N79-23481

**STRUCTURAL ENGINEERING**  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c31 N81-12283

A rectangular rod-wall sound shield  
[NASA-CASE-LAR-12883-1] c09 N81-29138

**STRUCTURAL FAILURE**  
Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NFC-12142-1] c38 N76-28563

**STRUCTURAL MEMBERS**  
Broadband chokes and absorbers to reduce spurious radiation patterns of antenna array caused by support structures  
[NASA-CASE-XMS-05303] c07 N69-27462

Electro-optical/computer system for aligning large structural members and maintaining correct position  
[NASA-CASE-XNP-02029] c14 N70-41955



- Nut and bolt fastener permitting all-directional movement of skin sections with respect to supporting structure  
[NASA-CASE-XLA-01807] c15 N71-10799
- Universal joints for connecting two displaced shafts or members  
[NASA-CASE-NFO-10646] c15 N71-28467
- Device for securing together structural members with axially stretched bolt and nut  
[NASA-CASE-GSC-11149-1] c15 N73-30457
- Method of laminating structural members  
[NASA-CASE-XLA-11028-1] c24 N74-27035
- Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c18 N75-27040
- Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c27 N76-14264
- Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c37 N80-22704
- Universal connectors for joining stringers  
[NASA-CASE-LAR-12744-1] c37 N81-31551
- STRUCTURAL STABILITY**
- Latching device  
[NASA-CASE-MFS-21606-1] c37 N75-15685
- Flanged major modular assembly jig  
[NASA-CASE-MSC-19372-1] c39 N76-31562
- STRUCTURAL VIBRATION**
- Rectangular electric conductors for conductor cables to withstand spacecraft vibration and controlled atmosphere  
[NASA-CASE-MFS-14741] c09 N70-20737
- Determining sway of buildings by low frequency device using pendulum  
[NASA-CASE-XMF-00479] c14 N70-34794
- Transducer for measuring deflections from vibrating structures  
[NASA-CASE-XLA-02135] c32 N71-16428
- Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c33 N80-29583
- STRUCTURES**
- Deformation measuring apparatus with feedback control for arbitrarily shaped structures  
[NASA-CASE-LAR-10098] c32 N71-26681
- STRUTS**
- Low onset rate energy absorber in form of strut assembly for crew couch of Apollo command module  
[NASA-CASE-MSC-12279-1] c15 N70-35679
- Collapsible support for antenna reflector applied to installation of spacecraft antennas  
[NASA-CASE-NFO-11751] c07 N73-24176
- Locking redundant link  
[NASA-CASE-LAR-11900-1] c37 N79-14382
- Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c31 N81-12283
- STUDS (STRUCTURAL MEMBERS)**
- Design of quick release locking pin for joining two or more load-carrying structural members  
[NASA-CASE-MFS-16495] c15 N72-11385
- Tool for mounting and removing studs with adhesive coated head portion  
[NASA-CASE-MFS-20299] c15 N72-11392
- Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c37 N74-25968
- STYRENES**
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-1] c27 N78-32256
- Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c27 N80-10358
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c27 N80-24438
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-1] c27 N80-26447
- SUBLIMATION**
- Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c34 N77-19353
- Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c27 N81-24258
- SUBMARINES**
- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c24 N78-27184
- SUBMERGING**
- Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c35 N80-18363
- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c37 N82-12441
- SUBMILLIMETER WAVES**
- Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c33 N81-24348
- SUBMINIATURIZATION**
- Micromicroampere current measuring circuit, with two subminiature thermionic diodes with filament cathodes  
[NASA-CASE-XNP-00384] c09 N71-13530
- SUBREFLECTORS**
- Dish antenna having switchable beamwidth --- with truncated concave ellipsoid subreflector  
[NASA-CASE-GSC-11760-1] c33 N75-19516
- SUBROUTINES**
- Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NFO-15295-1] c60 N82-11785
- SUBSONIC FLOW**
- Leading edge vortex flaps for drag reduction --- during subsonic flight  
[NASA-CASE-LAR-12750-1] c02 N81-19016
- SUBSONIC SPEED**
- Aerospace vehicle with variable planform for hypersonic and subsonic flight  
[NASA-CASE-XLA-00805] c31 N70-38010
- Construction of leading edges of surfaces for aerial vehicles performing from subsonic to above transonic speeds  
[NASA-CASE-XLA-01486] c01 N71-23497
- Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil  
[NASA-CASE-LAR-10585-1] c02 N76-22154
- Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c05 N79-24976
- SUBSONIC WIND TUNNELS**
- Variable geometry wind tunnel for testing aircraft models at subsonic speeds  
[NASA-CASE-XLA-07430] c11 N72-22246
- SUBSTRATES**
- Means and methods of depositing thin films on substrates  
[NASA-CASE-XNP-00595] c15 N70-34967
- Fabrication of solar cell banks for attaching solar cells to base members or substrates  
[NASA-CASE-XNP-00826] c03 N71-20895
- Method and apparatus for fabricating solar cell panels  
[NASA-CASE-XNP-03413] c03 N71-26726
- Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c44 N76-28635
- Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c74 N78-32854
- Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c35 N80-20560
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c35 N81-12389
- Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c27 N81-25209
- Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c25 N81-29180
- Method of repairing surface damage to porous refractory substrates --- shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c27 N81-29231
- SUBSTRUCTURES**
- Supporting structure for simultaneous exposure of pellets to X rays  
[NASA-CASE-XNP-06031] c15 N71-15606
- Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366
- System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c39 N80-10507
- SULFATES**
- Nitroaniline sulfate, intumescent paints

- [NASA-CASE-ARC-10099-1] c18 N71-15469
- SULFONES**
- Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c33 N75-27252
- SULFONIC ACID**
- Intumescent coatings containing  
4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c24 N78-14096
- SULFUR COMPOUNDS**
- Mercaptan terminated polymer containing sulfonic  
acid salts of nitrosubstituted aromatic amines  
for heat and moisture resistant coatings  
[NASA-CASE-ARC-10325] c06 N72-25147
- SULFUR DIOXIDES**
- Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c45 N76-17656
- Simultaneous treatment of SO<sub>2</sub> containing stack  
gases and waste water  
[NASA-CASE-MSC-16258-1] c45 N79-12584
- SULFURIC ACID**
- Potential heat exchange fluids for use in  
sulfuric acid vaporizers  
[NASA-CASE-NPO-15015-1] c25 N80-23394
- An improved synthesis of 2,4,8,10-tetroxaspiro  
(5.5) undecane  
[NASA-CASE-ARC-11243-2] c23 N80-31472
- SUM RULES**
- Describing circuit for obtaining sum of squares  
of numbers  
[NASA-CASE-XGS-04765] c08 N71-18693
- SUN**
- Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c44 N79-14526
- SUNGLASSES**
- Pliable frame for sunglasses in emergency  
survival kits  
[NASA-CASE-XMS-06064] c05 N71-23096
- SUNLIGHT**
- Illumination system design for use as sunlight  
simulator in space environment simulators with  
multiple light sources reflected to single  
virtual source  
[NASA-CASE-HQN-10781] c23 N71-30292
- Illumination control apparatus for compensating  
solar light  
[NASA-CASE-KSC-11010-1] c74 N79-12890
- SUPERCHARGERS**
- Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c20 N80-14188
- Diesel engine catalytic combustor system ---  
turbocharging  
[NASA-CASE-LEW-12995-1] c37 N80-26659
- SUPERCONDUCTING MAGNETS**
- Cryogenic flux-gated magnetometer using  
superconductors  
[NASA-CASE-XAC-02407] c14 N69-27423
- Improved alternator with windings of  
superconducting materials acting as permanent  
magnet  
[NASA-CASE-XLE-02824] c03 N69-39890
- Segmented superconducting magnet producing  
staggered magnetic field and suitable for  
broadband traveling wave masers  
[NASA-CASE-XGS-10518] c16 N71-28554
- Operating properties of superconducting magnet  
in vacuum environment  
[NASA-CASE-XNP-06503] c23 N71-29049
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c35 N76-16390
- Stable superconducting magnet --- high current  
levels below critical temperature  
[NASA-CASE-XNP-05373-1] c33 N79-21264
- SUPERCONDUCTIVITY**
- Superconducting alternator design with cryogenic  
fluid for cooling windings below critical  
temperature  
[NASA-CASE-XLE-02823] c09 N71-23443
- Superconductive resonant cavity for improved  
signal to noise ratio in communication signal  
[NASA-CASE-MSC-12259-2] c07 N72-33146
- Superconducting magnetic field trapping device  
for producing magnetic field in air  
[NASA-CASE-XNP-01185] c26 N73-26710
- Doped Josephson tunneling junction for use in a  
sensitive IR detector  
[NASA-CASE-NPO-13348-1] c33 N75-31332
- SUPERCONDUCTORS**
- Superconductive accelerometer employing variable  
force principle to determine acceleration of  
bodies  
[NASA-CASE-XNP-01099] c14 N71-15969
- Controlled diffusion reaction process for  
masking substrate of twisted multifilament  
superconductive ribbon  
[NASA-CASE-LEW-11726-1] c26 N73-26752
- Twisted wire or tube superconductor for filament  
windings  
[NASA-CASE-LEW-11015] c26 N73-32571
- Germanium coated microbridge and method  
[NASA-CASE-MPS-23274-1] c33 N78-13320
- SUPERCOOLING**
- Method and apparatus for supercooling and  
solidifying substances --- containless melts  
and space processing  
[NASA-CASE-MPS-25242-1] c35 N81-24413
- SUPERFLUIDITY**
- Helium refining by superfluidity  
[NASA-CASE-XNP-00733] c06 N70-34946
- Method and apparatus for generating coherent  
radiation in the ultra-violet region and above  
by use of distributed feedback  
[NASA-CASE-NFO-13346-1] c36 N76-29575
- SUPERHEATING**
- Thermal energy storage system --- operating on  
superheating of liquids  
[NASA-CASE-MPS-23167-1] c44 N76-31667
- SUPERHIGH FREQUENCIES**
- Dual band combiner for horn antenna  
[NASA-CASE-NFO-14519-1] c32 N80-23524
- SUPERSONIC AIRCRAFT**
- Variable sweep wing configuration for supersonic  
aircraft  
[NASA-CASE-XLA-00230] c02 N70-33255
- Supersonic aircraft variable sweep wing planform  
for varying aspect ratio  
[NASA-CASE-XLA-00350] c02 N70-38011
- Development and characteristics of variable  
sweep wing control system for supersonic  
aircraft  
[NASA-CASE-XLA-03659] c02 N71-11041
- Development and characteristics of translating  
horizontal tail assembly for supersonic aircraft  
[NASA-CASE-XLA-08801-1] c02 N71-11043
- Design of supersonic aircraft with novel fixed,  
swept wing planform  
[NASA-CASE-XLA-04451] c02 N71-12243
- Absorptive, nonreflecting barrier mounted  
between closely spaced jet engines on  
supersonic aircraft, for preventing shock wave  
interference  
[NASA-CASE-XLA-02865] c28 N71-15563
- Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c05 N76-29217
- SUPERSONIC COMBUSTION**
- Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c20 N74-13502
- Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c15 N78-32168
- SUPERSONIC DRAG**
- Bluff-shaped annular configuration for  
supersonic decelerator for reentry vehicles  
[NASA-CASE-XLE-00222] c02 N70-37939
- SUPERSONIC FLIGHT**
- Variable aspect ratio and variable sweep delta  
wing planforms for supersonic aircraft  
[NASA-CASE-XLA-00221] c02 N70-33266
- Supersonic or hypersonic vehicle control system  
comprising elevons with hinge line sweep and  
free of adverse aerodynamic cross coupling  
[NASA-CASE-XLA-08967] c02 N71-27088
- SUPERSONIC FLOW**
- Optical sensing of supersonic flows by  
correlating deflections in laser beams through  
flow  
[NASA-CASE-MPS-20642] c14 N72-21407
- Stagnation pressure probe --- for measuring  
pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c35 N74-32878
- SUPERSONIC INLETS**
- Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c02 N74-20646
- Shock position sensor for supersonic inlets ---  
measuring pressure in the throat of a  
supersonic inlet  
[NASA-CASE-LEW-11915-1] c35 N76-14431
- Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c15 N78-32168

**SUPERSONIC NOZZLES**

- Penshaped, supersonic exhaust nozzle design  
[NASA-CASE-XLE-00057] c28 N70-38711
- Telescoping-spike supersonic nozzle for turbojet or ramjet engines  
[NASA-CASE-XLE-00005] c28 N70-39899
- Electric arc heater with supersonic nozzle and fixed arc length for use in high temperature wind tunnels  
[NASA-CASE-XAC-01677] c09 N71-20816
- Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c07 N80-32392

**SUPERSONIC SPEEDS**

- Continuous operation, single phased, induction plasma accelerator producing supersonic speeds  
[NASA-CASE-XLA-01354] c25 N70-36946
- Static pressure probe  
[NASA-CASE-LAR-11552-1] c35 N76-14429

**SUPERSONIC TRANSPORTS**

- Position locating system for remote aircraft using voice communication and digital signals  
[NASA-CASE-GSC-10087-2] c21 N71-13958
- Traffic control system for supersonic transports using synchronous satellite for data relay between vehicles and ground station  
[NASA-CASE-GSC-10067-1] c02 N71-19287
- System and method for position locating for air traffic control involving supersonic transports  
[NASA-CASE-GSC-10087-3] c07 N72-12080
- Doppler compensated communication system for locating supersonic transport position  
[NASA-CASE-GSC-10087-4] c07 N73-20174
- Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c05 N78-32086

**SUPERSONIC WIND TUNNELS**

- Wind tunnel  
[NASA-CASE-LAR-10135-1] c09 N79-21083
- A rectangular rod-wall sound shield  
[NASA-CASE-LAR-12883-1] c09 N81-29138

**SUPPORT INTERFERENCE**

- Spherical bearing --- to reduce vibration effects  
[NASA-CASE-MFS-23447-1] c37 N79-11404

**SUPPORT SYSTEMS**

- Hydraulic support apparatus for dynamic testing of space vehicles under near-free flight conditions  
[NASA-CASE-XMP-03248] c11 N71-10604
- Supporting structure for simultaneous exposure of pellets to X rays  
[NASA-CASE-XNP-06031] c15 N71-15606
- Multilegged support system for wind tunnel test models subjected to thermal dynamic loading  
[NASA-CASE-XLA-01326] c11 N71-21481
- Adjustable support device with jacket screw for altering distance between base and supported member  
[NASA-CASE-NPO-10721] c15 N72-27484
- Hydrostatic bearing support  
[NASA-CASE-LEW-11158-1] c37 N77-28486

**SUPPORTS**

- Support techniques for restraint of slender bodies such as launch vehicles  
[NASA-CASE-XLA-02704] c11 N69-21540
- Pneumatic control of telescopic mirror support system  
[NASA-CASE-XLA-03271] c11 N69-24321
- Optical scanner mounted on rotating support structure with method of compensating for image or satellite rotation  
[NASA-CASE-XGS-02401] c14 N69-27485
- Support for flexible conductor cable between drawers or racks holding electronic equipment and cabinet assembly housing drawers or racks  
[NASA-CASE-XMP-07587] c15 N71-18701
- Swivel support for gas bearing for position adjustment between ball and supporting cup  
[NASA-CASE-XMP-C7808] c15 N71-23812
- Tracking mount for laser telescope employed in tracking large rockets and space vehicles to give information regarding azimuth and elevation  
[NASA-CASE-MFS-14017] c14 N71-26627
- Gas bearing for model support with capacity for measuring angular displacement of model in bearing  
[NASA-CASE-XLA-05346] c15 N71-28740
- Adjustable rigid mount for trihedral mirror formed of alloy with small coefficient of thermal expansion supporting screws and spring-biased plates

- [NASA-CASE-XNP-08907] c23 N71-29123
- Slotted fine-adjustment support for optical devices  
[NASA-CASE-MFS-20249] c15 N72-11386
- Base support for expansible and contractible coupling between two members  
[NASA-CASE-NPO-11059] c15 N72-17454
- Optical mirror support system  
[NASA-CASE-XER-07896-2] c23 N72-22673
- Fixture for supporting articles during vibration tests comprising integral annular unit  
[NASA-CASE-MFS-20523] c14 N72-27412
- Design and development of test stand system for supporting test items in vacuum chamber  
[NASA-CASE-MFS-21362] c11 N73-20267
- Collapsible support for antenna reflector applied to installation of spacecraft antennas  
[NASA-CASE-NPO-11751] c07 N73-24176
- Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c44 N74-19692
- Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c18 N74-27397
- Variable contour securing system  
[NASA-CASE-MSC-16270-1] c37 N78-27423
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c26 N80-28492
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c52 N81-25661

**SUPPRESSORS**

- Electronic background suppression field scanning sensor for detecting point source targets  
[NASA-CASE-XGS-05211] c07 N69-39980

**SURFACE ACOUSTIC WAVE DEVICES**

- Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NFO-13673-1] c71 N77-26919

**SURFACE DEFECTS**

- Surface defect detection by reflected microwave radiation pattern  
[NASA-CASE-ARC-10009-1] c15 N71-17822
- Method and device for detection of surface discontinuities or defects  
[NASA-CASE-MSC-14187-1] c35 N74-32879
- Method of repairing surface damage to porous refractory substrates --- shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c27 N81-29231

**SURFACE DIFFUSION**

- Metallic film diffusion into metal or ceramic surfaces for boundary lubrication in aerospace environments  
[NASA-CASE-XLE-01765] c18 N71-10772
- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NFC-14657-1] c74 N81-17887

**SURFACE FINISHING**

- Development of procedure for producing thin transparent films of zinc oxide on transparent refractory substrate  
[NASA-CASE-FRC-10019] c15 N73-12487
- Device and method for determining X ray reflection efficiency, scattering properties, and surface finish of optical surfaces  
[NASA-CASE-MFS-20243] c23 N73-13662
- Surface finishing --- for aircraft wings  
[NASA-CASE-MSC-12631-1] c24 N77-28225
- Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c27 N80-24437
- Surface finishing  
[NASA-CASE-MSC-12631-3] c27 N81-14077
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N81-19455
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190

**SURFACE IONIZATION**

- Electrodes having array of small surfaces for field ionization  
[NASA-CASE-ERC-10013] c09 N71-26678
- Development of method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c15 N72-25457

## SURFACE LAYERS

- Bismuth and lead surface coatings for gas bearings in aerospace engineering  
[NASA-CASE-XGS-02011] c15 N71-20739
- Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient  
[NASA-CASE-ERC-10073-1] c24 N74-19769
- Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c27 N82-10227

## SURFACE PROPERTIES

- Anti-wettable materials brazing processes using titanium and zirconium for surface pretreatment  
[NASA-CASE-XMS-03537] c15 N69-21471
- Ablation article and surface for analyzing flow transition on ablative surface  
[NASA-CASE-LAR-10439-1] c33 N73-27796
- Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c34 N74-15652
- Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c36 N74-20009
- Apparatus for microbiological sampling --- including automatic swabbing  
[NASA-CASE-LAR-11069-1] c35 N75-12272
- Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c35 N77-27367
- Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c74 N78-27904
- Displacement probes with self-contained exciting medium  
[NASA-CASE-LAR-11690-1] c35 N80-14371
- Apparatus for electrolytically tapered or contoured cavities  
[NASA-CASE-XNP-08835-1] c37 N80-14395
- Mechanical bonding of metal  
[NASA-CASE-LEW-12941-1] c31 N81-16329
- Tactile sensing system --- manipulator controllers  
[NASA-CASE-NPO-15094-1] c33 N81-16386

## SURFACE REACTIONS

- Chemical spot test for identifying magnesium or magnesium alloys used in aerospace applications  
[NASA-CASE-LAR-10953-1] c17 N73-27446

## SURFACE ROUGHNESS

- Roughness detector for recording surface pattern of irregularities  
[NASA-CASE-XLA-00203] c14 N70-34161
- Optical apparatus for visual detection of roundness and regularity of cone surfaces  
[NASA-CASE-XNP-00462] c14 N70-34298
- Describing device for surveying contour of surface using X-Y plotter and traveling transducer  
[NASA-CASE-XLA-08646] c14 N71-17586
- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c35 N79-10391
- Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c31 N81-16327

## SURFACE ROUGHNESS EFFECTS

- Aerodynamically stable meteorological balloon using surface roughness effect  
[NASA-CASE-XNP-04163] c02 N71-23007

## SURFACE TEMPERATURE

- Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c34 N81-12363

## SURFACE VEHICLES

- Optimal control system for automatic speed regulation of electric driven motor vehicle  
[NASA-CASE-NPO-11210] c11 N72-20244
- Self-propelled vehicle with wheel, track laying, and walking capability for exploratory expolaration  
[NASA-CASE-NPO-11366] c11 N73-26238
- Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPO-11856-1] c36 N74-15145
- Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c32 N75-26194
- Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c37 N79-10420
- Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c33 N82-12346

## SURFACE WAVES

- Development of method for suppressing excitation of electromagnetic surface waves on dielectric converter antenna  
[NASA-CASE-XLA-10772] c07 N71-28980

## SURFACES

- Techniques for recovery of multistage rocket vehicles by providing lifting surfaces on individual sections  
[NASA-CASE-XMF-00389] c31 N70-34176
- Kinetic and static friction force measurement between magnetic tape and magnetic head surfaces  
[NASA-CASE-XNP-08680] c14 N71-22995
- Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c35 N74-13129
- Photoelectron spectrometer with means for stabilizing sample surface potential  
[NASA-CASE-NPC-13772-1] c35 N78-10429

## SURFACTANTS

- Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c25 N79-11152

## SURGERY

- Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c52 N78-14773
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c52 N80-14684

## SURGES

- Silicon controlled rectifier inverter with compensation of transients to avoid false gating  
[NASA-CASE-XLA-08507] c09 N69-39984
- Turn on current transient limiter for controlling peak current flow in high capacity load  
[NASA-CASE-GSC-10413] c10 N71-26531

## SURGICAL INSTRUMENTS

- Ultrasonic device for ophthalmic eye surgery with safe removal of macerated material  
[NASA-CASE-LEW-11669-1] c05 N73-27062
- Ophthalmic liquifaction pump  
[NASA-CASE-LEW-12051-1] c52 N75-33640

## SURVIVAL EQUIPMENT

- Survival couch for aircraft or spacecraft crews  
[NASA-CASE-XLA-00118] c05 N70-33285
- Lightweight life preserver without fastening devices  
[NASA-CASE-XMS-00864] c05 N70-36493
- Pliable frame for sunglasses in emergency survival kits  
[NASA-CASE-XMS-06064] c05 N71-23096

## SUSPENDING (HANGING)

- Parallel motion suspension device for measuring instruments  
[NASA-CASE-XNP-01567] c15 N70-41310
- Cable suspension and inclined walkway system for simulating reduced or zero gravity environments  
[NASA-CASE-XLA-01787] c11 N71-16028
- Suspended mass oscillation damper based on impact energy absorption for damping wind induced oscillations of tall stacks, antennas, and umbilical towers  
[NASA-CASE-LAR-10193-1] c15 N71-27146

## SWEAT

- Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c52 N81-29763

## SWEAT COOLING

- Transpiration cooled turbine blade made from metallic or ceramic wires  
[NASA-CASE-XLE-00020] c15 N70-33226
- Transpirationally cooled heat ablation system for interplanetary spacecraft reentry shielding  
[NASA-CASE-XMS-02677] c31 N70-42075
- Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c20 N74-32919

## SWEEP CIRCUITS

- Transistorized circuit for producing multiple slope voltage sweep  
[NASA-CASE-XMS-03542] c09 N71-28926

## SWEEP EFFECT

- Supersonic or hypersonic vehicle control system comprising elevons with hinge line sweep and free of adverse aerodynamic cross coupling  
[NASA-CASE-XLA-08967] c02 N71-27088
- Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c05 N80-14107

## SWEEP FREQUENCY

- Swept group delay measurement

[NASA-CASE-NPO-13909-1] c33 N78-25319

**SWELLING**  
 Para-benzoquinone dioxime and concentrated mineral acid processed to yield intumescent or fire resistant, heat insulating materials  
 [NASA-CASE-ARC-10304-1] c18 N73-26572

**SWEEP WINGS**  
 Design of supersonic aircraft with novel fixed, swept wing planform  
 [NASA-CASE-XLA-04451] c02 N71-12243  
 Leading edge vortex flaps for drag reduction --- during subsonic flight  
 [NASA-CASE-LAR-12750-1] c02 N81-19016

**SWIRLING**  
 Sloss and swirl alleviator for liquid propellant tanks during transport and flight  
 [NASA-CASE-XLA-05749] c15 N71-19569  
 Swirl can, full-annulus combustion chambers for high performance gas turbine engines  
 [NASA-CASE-LEW-11326-1] c23 N73-30665

**SWITCHES**  
 Switching mechanism with energy stored in coil spring  
 [NASA-CASE-XGS-00473] c03 N70-38713  
 Digital memory system with multiple switch cores for driving each word location  
 [NASA-CASE-XNP-01466] c10 N71-26434  
 Radio frequency controlled solid state switch  
 [NASA-CASE-ARC-10136-1] c09 N72-22202  
 High power RF coaxial switch  
 [NASA-CASE-NPO-14229-1] c33 N80-18285  
 Fiber optic crossbar switch for automatically patching optical signals  
 [NASA-CASE-KSC-11104-1] c74 N81-12862

**SWITCHING CIRCUITS**  
 Solid state switching circuit design to increase current capacity of low rated relay contacts  
 [NASA-CASE-XNP-09228] c09 N69-27500  
 Power control switching circuit using low voltage semiconductor controlled rectifiers for high voltage isolation  
 [NASA-CASE-XNP-02713] c10 N69-35888  
 Selective gold diffusion on monolithic silicon chips for switching and nonswitching amplifier devices and circuits and linear and digital logic circuits  
 [NASA-CASE-ERC-10072] c09 N70-11148  
 Electrical power system for space flight vehicles operating over extended periods  
 [NASA-CASE-XMF-00517] c03 N70-34157  
 High speed low level voltage commutating switch  
 [NASA-CASE-XAC-00060] c09 N70-39915  
 Switching circuit with regeneratively connected transistors eliminating power consumption when not in use  
 [NASA-CASE-XNP-02654] c10 N70-42032  
 Using electron beam switching for brushless motor commutation  
 [NASA-CASE-XGS-01451] c09 N71-10677  
 Increasing power conversion efficiency of electronic amplifiers by power supply switching  
 [NASA-CASE-XMS-00945] c09 N71-10798  
 Silicon controlled rectifier pulse gate amplifier for blocking false gating caused by negative transient voltages  
 [NASA-CASE-XLA-07497] c09 N71-12514  
 Describing magnetic core current switching device for steering bipolar current pulses to memory units  
 [NASA-CASE-NPO-10201] c08 N71-18654  
 Transistorized dc-coupled multivibrator with noninverted output signal  
 [NASA-CASE-XNP-09450] c10 N71-18723  
 Reversible current directing circuitry for reversible motor control  
 [NASA-CASE-XLA-09371] c10 N71-18724  
 Constructing Exclusive-Or digital logic circuit in single module  
 [NASA-CASE-XLA-07732] c08 N71-18751  
 Polarization diversity monopulse tracking receiver design without radio frequency switches  
 [NASA-CASE-XGS-03501] c09 N71-20864  
 Sight switch using infrared source and sensor mounted beside eye  
 [NASA-CASE-XMF-03934] c09 N71-22985  
 Complementary regenerative transistorized switch circuit employing positive and negative feedback  
 [NASA-CASE-XGS-02751] c09 N71-23015

Reliable magnetic core circuit apparatus with application in selection matrices for digital memories  
 [NASA-CASE-XNP-01318] c10 N71-23033  
 Electric circuit for producing high current pulse having fast rise and fall time  
 [NASA-CASE-XMS-04919] c09 N71-23270  
 Electric circuit for reversing direction of current flow  
 [NASA-CASE-XNP-00952] c10 N71-23271  
 Switching series regulator with gating control network  
 [NASA-CASE-XMS-09352] c09 N71-23316  
 Microwave waveguide switch with rotor position control  
 [NASA-CASE-XNP-06507] c09 N71-23548  
 Signaling summary alarm circuit with semiconductor switch for faulty contact indications  
 [NASA-CASE-XLE-03061-1] c10 N71-24798  
 Solid state circuit for switching alternating current input signal as function of direct current gating transistor  
 [NASA-CASE-XNP-06505] c10 N71-24799  
 Inverters for changing direct current to alternating current  
 [NASA-CASE-XGS-06226] c10 N71-25950  
 Design and development of multistage current steering switch with inductively coupled magnetic cores  
 [NASA-CASE-XNP-08567] c09 N71-26000  
 Pulse duration control device for driving slow response time loads in selected sequence including switching and delay circuits and magnetic storage  
 [NASA-CASE-XGS-04224] c10 N71-26418  
 Turn on current transient limiter for controlling peak current flow in high capacity load  
 [NASA-CASE-GSC-10413] c10 N71-26531  
 Input radio frequency circuit for switching type absolute temperature measuring radiometer for noise sources  
 [NASA-CASE-ERC-11020] c14 N71-26774  
 Inverter drive circuit for semiconductor switch  
 [NASA-CASE-LEW-10233] c10 N71-27126  
 Phase locked demodulator with bandwidth switching amplifier circuit  
 [NASA-CASE-XNP-01107] c10 N71-28859  
 Monostable multivibrator for producing output pulse widths with positive feedback NOR gates  
 [NASA-CASE-MSC-13492-1] c10 N71-28860  
 Digital magnetic core memory with sensing amplifier circuits  
 [NASA-CASE-XNP-01012] c08 N71-28925  
 Current regulating voltage divider design with load current shunting  
 [NASA-CASE-MFS-20935] c09 N71-34212  
 Relay controlled voltage switching unit for scanning circuitry of star tracker  
 [NASA-CASE-NPO-11253] c09 N72-17157  
 Spacecraft solar cell system with switching circuit to provide compensation for environmental changes  
 [NASA-CASE-GSC-10669-1] c03 N72-20031  
 Flow rate switch for detecting variations in fluid flow velocity through conduits of pressurized systems  
 [NASA-CASE-NPO-10722] c09 N72-20199  
 Switching type voltage regulator with relatively simple circuit arrangement  
 [NASA-CASE-LEW-11005-1] c09 N72-21243  
 Development and characteristics of data multiplexer circuit using field effect transistors arranged in tree switching configuration  
 [NASA-CASE-NPO-11333] c08 N72-22162  
 Pulse coupling circuit with switch between generator and winding  
 [NASA-CASE-LEW-10433-1] c09 N72-22197  
 Solid state remote circuit selector switching circuit  
 [NASA-CASE-LEW-10387] c09 N72-22201  
 Pressure operated electrical switch responsive to pressure decrease after pressure increase  
 [NASA-CASE-LAR-10137-1] c09 N72-22204  
 Transistorized switching logic circuits with tunnel diodes  
 [NASA-CASE-GSC-10878-1] c10 N72-22236

- Switching circuit for control of cathode ray tube beam with fast rise time for output signal  
[NASA-CASE-KSC-10647-1] c10 N72-31273
- Electronic video editor for switching video input signals to common output channel  
[NASA-CASE-KSC-10003] c10 N73-13235
- Solid state switch for variable circuit switching  
[NASA-CASE-NPO-10847-1] c08 N73-30135
- Transparent switchboard which permits optical display devices to be adapted for use in man machine communications  
[NASA-CASE-MSC-13746-1] c10 N73-32143
- High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c33 N74-22814
- Isolated output system for a class E switching-mode amplifier  
[NASA-CASE-MFS-21616-1] c33 N75-30429
- Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c33 N75-30431
- Multi-computer multiple data path hardware exchange system  
[NASA-CASE-NPO-13422-1] c60 N76-14818
- Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c33 N77-28385
- Window comparator  
[NASA-CASE-FRC-10090-1] c33 N78-18308
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c33 N79-24254
- System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c33 N79-28415
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c44 N80-14472
- Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c33 N80-33679
- Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c74 N81-12862
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NFO-14316-1] c33 N81-33404
- Active lamp pulse driver circuit --- for use in laser transmitters  
[NASA-CASE-GSC-12566-1] c36 N82-10390
- SWITCHING THEORY**
- Multiple circuit switch apparatus requiring minimum hand and eye movement by operator  
[NASA-CASE-XAC-03777] c10 N71-15909
- SHIVELS**
- Swivel support for gas bearing for position adjustment between ball and supporting cup  
[NASA-CASE-XMF-07808] c15 N71-23812
- SYNCHRONISM**
- Synchronizing apparatus for multi-access satellite time division multiplex system  
[NASA-CASE-XGS-05918] c07 N69-39974
- Circuitry for generating sync signals in FM communication systems including video information  
[NASA-CASE-XNP-10830] c07 N71-11281
- Development of method for synchronizing clocks at several ground stations based on signals received from spacecraft or satellites  
[NASA-CASE-XNP-06875] c10 N71-23099
- Pulse generator for synchronizing or resetting electronic signals without requiring separate external source  
[NASA-CASE-XGS-03632] c09 N71-23311
- Time synchronization system for synchronizing clocks at remote locations with master clock using moon reflected coded signals  
[NASA-CASE-NPO-10143] c10 N71-26326
- System designed to reduce time required for obtaining synchronization in data communication with spacecraft utilizing pseudonoise codes  
[NASA-CASE-NPO-10214] c10 N71-26577
- SYNCHRONIZED OSCILLATORS**
- Development of phase demodulation system with two phase locked loops  
[NASA-CASE-XNP-00777] c10 N71-19469
- Phase locked phase modulation system with voltage controlled oscillator for final phase linearity  
[NASA-CASE-XNP-05382] c10 N71-23544
- Automatic frequency control device for providing frequency reference for voltage controlled oscillator  
[NASA-CASE-KSC-10393] c09 N72-21247
- SYNCHRONIZERS**
- Development and characteristics of burst synchronization detection system  
[NASA-CASE-XMS-05605-1] c10 N71-19468
- Time division relay synchronizer with master sync pulse for activating binary counter to produce signal identifying time slot for station  
[NASA-CASE-GSC-10373-1] c07 N71-19773
- Design and development of synchronous servo loop control system  
[NASA-CASE-XNP-03744] c10 N71-20448
- Digital synchronizer for extracting binary data in receiver of PSK/PCM communication system  
[NASA-CASE-NPO-10851] c07 N71-24613
- Video sync processor with phase locked system  
[NASA-CASE-KSC-10002] c10 N71-25865
- Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12462-1] c32 N74-20809
- Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12494-1] c32 N74-20810
- System for generating timing and control signals  
[NASA-CASE-NFO-13125-1] c33 N75-19519
- Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c17 N76-22245
- SYNCHRONOUS MOTORS**
- Synchronous dc direct-drive system comprising multiple-loop hybrid control system controlling load directly connected to actuator  
[NASA-CASE-GSC-10065-1] c10 N71-27136
- Motor run-up system --- power lines  
[NASA-CASE-NPC-13374-1] c33 N75-19524
- SYNCHRONOUS SATELLITES**
- Position locating system for remote aircraft using voice communication and digital signals  
[NASA-CASE-GSC-10087-2] c21 N71-13958
- Serrodyne traveling wave tube reentrant amplifier for synchronous communication satellites operating at microwave frequencies  
[NASA-CASE-XGS-01022] c07 N71-16088
- Traffic control system for supersonic transports using synchronous satellite for data relay between vehicles and ground station  
[NASA-CASE-GSC-10087-1] c02 N71-19287
- Tracking antenna system with array for synchronous satellite or ground based radar  
[NASA-CASE-GSC-10553-1] c07 N71-19854
- Satellite network synchronization system with multiple access to multiplex repeater  
[NASA-CASE-GSC-10390-1] c07 N72-11149
- Development of device for simulating charge and discharge cycle of battery in synchronous orbit  
[NASA-CASE-GSC-11211-1] c03 N72-25020
- Systems and methods for determining radio frequency interference  
[NASA-CASE-GSC-12150-1] c32 N79-11265
- Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c32 N80-20448
- SYNTHESIS**
- Synthesis of polymeric schiff bases by schiff-base exchange reactions  
[NASA-CASE-XMF-08651] c06 N71-11236
- Preparation of ordered poly(arylenesiloxane)/polymers  
[NASA-CASE-XMF-10753] c06 N71-11237
- Synthesis and chemical properties of imidazopyrrolone/imide copolymers  
[NASA-CASE-XLA-08802] c06 N71-11238
- Stable polyimide synthesis from mixtures of monomeric diamines and polycarboxylic acid esters  
[NASA-CASE-LEW-11325-1] c06 N73-27980
- SYNTHESIS (CHEMISTRY)**
- Synthesis of dawsonites  
[NASA-CASE-ARC-113261-1] c25 N80-31490
- Prepolymer dianhydrides  
[NASA-CASE-NFO-13899-1] c27 N80-32515
- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPC-10830-1] c27 N81-15104
- Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c27 N81-24256
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13504-1] c27 N81-27279

Synthesis of polycrystals  
[NASA-CASE-ARC-11244-1] c23 N82-16174

**SYNTHESIZERS**

Digitally controlled frequency synthesizer for pulse frequency modulation telemetry systems  
[NASA-CASE-XGS-02317] c09 N71-23525

**SYNTHETIC APERTURE RADAR**

Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c35 N79-10391

Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c32 N79-14268

Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c32 N79-19195

Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c32 N80-32607

An electro-optical Doppler tracker means and method for optical correlation of synthetic aperture radar data  
[NASA-CASE-NPO-14998-1] c33 N81-15194

Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c32 N82-10286

Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c32 N82-12297

A pipelined digital SAR azimuth correlator using hybrid FFT/transversal-filter  
[NASA-CASE-NPO-15519-1] c32 N82-12298

**SYNTHETIC FIBERS**

Manufacture of fluid containers from fused coated polyester sheets having resealable septum  
[NASA-CASE-NPO-10123] c15 N71-24835

Structure of fabric layers for micrometeoroid protection garment with capability for eliminating heat shorts for use in manufacturing space suits  
[NASA-CASE-MSC-12109] c18 N71-26285

Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747

Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c35 N78-25391

Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c27 N78-32262

Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c25 N81-17187

Method of carbonizing polyacrylonitrile fibers and resulting product  
[NASA-CASE-ARC-11261-1] c24 N81-29164

**SYNTHETIC FUELS**

Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c27 N81-17261

**SYNTHETIC RESINS**

Process permitting application of synthetic resin coating to irregular-shaped objects at ambient temperature  
[NASA-CASE-XNP-06508] c18 N69-39895

Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c27 N81-27272

**SYNTHETIC RUBBERS**

Process for the preparation of polycarboranylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c27 N81-27271

**SYRINGES**

Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c51 N81-14605

Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c35 N81-29407

**SYSTEM EFFECTIVENESS**

System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c74 N79-11865

**SYSTEM FAILURES**

Tape recorder designed for low power consumption and resistance to operational failure under high stress conditions  
[NASA-CASE-XGS-08259] c14 N71-23698

Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c35 N75-30504

Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c07 N81-19115

**SYSTEMS ANALYSIS**

Analog to digital converter analyzing system  
[NASA-CASE-NPO-10560] c08 N72-22166

**SYSTEMS ENGINEERING**

Design of magnetohydrodynamic induction machine with end poles which produce compensating magnetic fields  
[NASA-CASE-XNP-07481] c25 N69-21929

Hovering type flying vehicle design and principle mechanisms for manned or unmanned use  
[NASA-CASE-MSC-12111-1] c02 N71-11039

Solar battery with interconnecting means for plural cells  
[NASA-CASE-XNP-06506] c03 N71-11050

Transparent polycarbonate resin, shell helmet and latch design for high altitude and space flight  
[NASA-CASE-XMS-04935] c05 N71-11190

Design and operation of multi-feed cone Cassegrain antenna  
[NASA-CASE-NPO-10539] c07 N71-11285

Design and operation of viscous pendulum damper  
[NASA-CASE-XLA-02079] c12 N71-16894

Alarm system design for monitoring one or more relay circuits  
[NASA-CASE-XMS-10984-1] c10 N71-19417

Wide range analog data compression system  
[NASA-CASE-XGS-02612] c08 N71-19435

Space suit body heat exchanger design composed of thermal conductance yarn and liquid coolant loops  
[NASA-CASE-XMS-09571] c05 N71-19439

Silicon radiation detecting probe design for in vivo biomedical use  
[NASA-CASE-XMS-01177] c05 N71-19440

Design and operation of high speed binary to decimal conversion system  
[NASA-CASE-XGS-01230] c08 N71-19544

Spatter proof evaporant source design for use in vacuum deposition of solid thin films on substrates  
[NASA-CASE-XMF-06065] c15 N71-20395

Method and apparatus for fabrication of heat insulating and ablative reentry structure  
[NASA-CASE-XMS-02009] c33 N71-20834

Polarization diversity monopulse tracking receiver design without radio frequency switches  
[NASA-CASE-XGS-03501] c09 N71-20864

Pneumatic cantilever beams and platform for space erectable structure  
[NASA-CASE-XLA-01731] c32 N71-21045

Magnetically opened diaphragm design with camera shutter and expansion tube applications  
[NASA-CASE-XLA-03660] c15 N71-21060

Portable apparatus producing high velocity annular air column surrounding low velocity, filtered, superclean air central core for industrial clean room environmental control  
[NASA-CASE-XMF-03212] c15 N71-22721

Rotary spindle lathe attachments for machining geometrical cones  
[NASA-CASE-XMS-04292] c15 N71-22722

Apparatus and method for spin forming tubular elbows with high strength, uniform thickness, and close tolerances  
[NASA-CASE-XMF-01083] c15 N71-22723

Spacecraft air lock system to provide ingress and egress of astronaut without subjecting vehicular environment to vacuum of space  
[NASA-CASE-XLA-02050] c31 N71-22968

Method of statickeeping for lenticular gravity gradient satellites  
[NASA-CASE-XLA-03132] c31 N71-22969

Filler valve design for supplying liquid propellants at high pressure to space vehicles  
[NASA-CASE-XNP-01747] c15 N71-23024

Method and apparatus for producing very low temperature refrigeration based on gas pressure balance  
[NASA-CASE-XNP-08877] c15 N71-23025

Monitoring circuit design for sampling circuit control and reduction of time-bandwidth in video communication systems  
[NASA-CASE-XNP-02791] c07 N71-23026

Multisample test chamber for exposing materials to X rays, temperature change, and gaseous conditions and determination of material effects  
[NASA-CASE-XMS-02930] c11 N71-23042

Variable duration pulse integrator design for integrating pulse duration modulated pulses with elimination of ripple content  
[NASA-CASE-XLA-01219] c10 N71-23084

Sealed electrochemical cell with flexible casing for varying electrolyte level in cell  
[NASA-CASE-XGS-01513] c03 N71-23336

Mosaic semiconductor radiation detector and position indicator systems engineering for low energy particles  
[NASA-CASE-XGS-03230] c14 N71-23401

Device for measuring two orthogonal components of force with gallium flotation of measuring target for use in vacuum environments  
[NASA-CASE-XAC-04885] c14 N71-23790

Transducer circuit design with single coaxial cable for input and output connections including incorporation into miniaturized catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597

Method of attaching cover glass to silicon solar cell without using adhesive  
[NASA-CASE-XLE-08569-2] c03 N71-24681

Development of attitude control system for sounding rocket stabilization during ballistic phase of flight  
[NASA-CASE-XGS-01654] c31 N71-24750

Temperature telemetry transmitter with frequency determining tank circuit for short range transmission  
[NASA-CASE-NPO-10649] c07 N71-24840

Tuning arrangement for frequency control of magnetron-type electron discharge device  
[NASA-CASE-XNP-05771] c09 N71-24841

Broadband modified turnstile antenna for use in space tracking and communications  
[NASA-CASE-MSC-12209] c09 N71-24842

Apparatus to determine electric field strength by measuring deflection of electron beam impinging on target  
[NASA-CASE-XNP-06617] c09 N71-24843

Binary to decimal decoder logic circuit design with feedback control and display device  
[NASA-CASE-XKS-06167] c08 N71-24890

Noninterruptable digital counter circuit design with display device for pulse frequency modulation  
[NASA-CASE-XNP-09759] c08 N71-24891

Quick disconnect duct coupling device for single-handed operation  
[NASA-CASE-MFS-20395] c15 N71-24903

Brushless dc tachometer design with Hall effect crystals and output voltage magnitude proportional to rotor speed  
[NASA-CASE-MFS-20385] c09 N71-24904

Pneumatic mechanism for releasing hook and loop fasteners between large rigid structures  
[NASA-CASE-XMS-10660-1] c15 N71-25975

Sealed fluorescent tube light unit capable of connection with other units to form string of work lights  
[NASA-CASE-XKS-05932] c09 N71-26787

Apparatus for semiautomatic inspection of microfilmed documents for density, resolution, size, and position  
[NASA-CASE-MFS-20240] c14 N71-26788

Method and apparatus for remote measurement of displacement of marks on specimen undergoing tensile test  
[NASA-CASE-NPO-10778] c14 N72-11364

Spacecraft solar cell system with switching circuit to provide compensation for environmental changes  
[NASA-CASE-GSC-10669-1] c03 N72-20031

Electric storage battery with high impact resistance  
[NASA-CASE-NPO-11021] c03 N72-20032

Method and apparatus for providing active attitude control for spacecraft by converting any attitude motion of vehicle into simple rotational motion  
[NASA-CASE-HQN-10439] c21 N72-21624

Development of light sensing system for controlled orientation of object relative to sun or other light source  
[NASA-CASE-NPO-11311] c14 N72-25414

Development of thrust control system for application to control of aircraft and spacecraft  
[NASA-CASE-MSC-13397-1] c21 N72-25595

Development of computer program for estimating reliability of self-repair and fault-tolerant systems with respect to selected system and mission parameters  
[NASA-CASE-NPO-13086-1] c15 N73-12495

Measurement system for physical quantity represented by or converted to variable frequency signal  
[NASA-CASE-MFS-20658-1] c14 N73-30386

Design of precision vertical alignment system using laser with gravitationally sensitive cavity  
[NASA-CASE-ARC-10444-1] c16 N73-33397

System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c35 N74-13132

Three mirror glancing incidence system for X-ray telescope  
[NASA-CASE-MFS-21372-1] c74 N74-27866

Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c35 N75-25124

Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c36 N77-25502

Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c15 N78-25119

Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c44 N78-31526

Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c44 N79-23481

Contour measurement system  
[NASA-CASE-MFS-23726-1] c43 N79-26439

Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c37 N80-32716

System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c54 N81-24724

## T

## TACHOMETERS

Digital cardiometer incorporating circuit for measuring heartbeat rate of subject over predetermined portion of one minute also converting rate to beats per minute  
[NASA-CASE-XMS-02399] c05 N71-22896

Brushless dc tachometer design with Hall effect crystals and output voltage magnitude proportional to rotor speed  
[NASA-CASE-MFS-20385] c09 N71-24904

Development of instantaneous reading tachometer for measuring electrocardiogram signal rate  
[NASA-CASE-MFS-20418] c14 N73-24473

Tachometer  
[NASA-CASE-MFS-23175-1] c35 N77-30436

## TAKEOFF

Aircraft instrument for indicating malfunctions during takeoff  
[NASA-CASE-XLA-00100] c14 N70-36807

Aircraft indicator for pilot control of takeoff roll, climbout path and verticle flight path in poor visibility conditions  
[NASA-CASE-XLA-00487] c14 N70-40157

## TANGENTS

Integrated circuit tangent function generator  
[NASA-CASE-MSC-13907-1] c10 N73-26230

## TANK GEOMETRY

Liquid propellant tank design with semitoroidal bulkhead  
[NASA-CASE-XMF-01899] c31 N70-41948

## TANKS (CONTAINERS)

Radiation source and detection system for measuring amount of liquid inside tanks independently of liquid configuration  
[NASA-CASE-MSC-12280] c27 N71-16348

Development of apparatus and method for testing leakage of large tanks



- [NASA-CASE-XMF-02392] c32 N71-24285  
Floating baffle for tank drain  
[NASA-CASE-KSC-10639] c15 N73-26472  
Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c36 N75-15029
- TANTALUM**  
Oxygen-doped tantalum emitter for thermionic devices such as cesium vapor diodes  
[NASA-CASE-NFO-11138] c03 N70-34646  
Arc electrode of graphite with tantalum ball tip  
[NASA-CASE-XLE-04788] c09 N71-22587  
Organometallic compounds of niobium and tantalum useful for film deposition  
[NASA-CASE-XNP-04023] c06 N71-28808  
Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c35 N77-32454
- TANTALUM ALLOYS**  
Evaporating crucible of tantalum-tungsten foil, nickel alumina bonding agent, and ceramic coating  
[NASA-CASE-XLA-03105] c15 N69-27483  
Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c26 N78-18182
- TANTALUM CARBIDES**  
Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAB-11902-1] c27 N78-17206
- TANTALUM OXIDES**  
Development of thin film temperature sensor from TaO  
[NASA-CASE-NPO-11775] c26 N72-28761
- TAPE RECORDERS**  
Plural recorder system which limits signal recording to signals of sufficient interest  
[NASA-CASE-XMS-06949] c09 N69-21467  
Endless loop tape transport mechanism for driving and tensioning recording medium in magnetic tape recorder  
[NASA-CASE-XGS-01223] c07 N71-10609  
Development of low friction magnetic recording tape  
[NASA-CASE-XGS-C0373] c23 N71-15978  
Tape guidance system for multichannel digital recording system  
[NASA-CASE-XNP-09453] c08 N71-19420  
Design and development of synchronous servo loop control system  
[NASA-CASE-XNP-03744] c10 N71-20448  
Development of data storage system for storing digital data in high density format on magnetic tape  
[NASA-CASE-XNP-02778] c08 N71-22710  
Digital telemetry system apparatus to reduce tape recorder wow and flutter noise during playback  
[NASA-CASE-XGS-01812] c07 N71-23001  
Tape recorder designed for low power consumption and resistance to operational failure under high stress conditions  
[NASA-CASE-XGS-08259] c14 N71-23698  
Transient video signal tape recorder with expanded playback  
[NASA-CASE-ARC-10003-1] c09 N71-25666  
Closed loop servosystem for variable speed tape recorders onboard spacecraft  
[NASA-CASE-NPO-10700] c07 N71-33613  
Design and characteristics of recording system for selective reprocessing and filtering of data to obtain optimum signal to noise ratios  
[NASA-CASE-ERC-10112] c07 N72-21119  
Video tape recorder with scan conversion playback for color television signals  
[NASA-CASE-NPO-10166-1] c07 N73-22076  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c35 N76-16391  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c35 N77-17426
- TAPERED COLUMNS**  
Method for shaping regeneratively cooled rocket motor casing having minimum thickness at each channel cross section  
[NASA-CASE-XLE-00409] c28 N71-15658  
Regeneratively cooled rocket motor casing with tapered channels to insure minimum thicknesses at each channel cross section for necessary strength requirements
- [NASA-CASE-XLE-05689] c28 N71-15659
- TARGET ACQUISITION**  
Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c16 N72-13437  
Target acquisition antenna feed with reflector system  
[NASA-CASE-GSC-10064-1] c10 N72-22235  
Development of electronic detection system for remotely determining number and movement of enemy personnel  
[NASA-CASE-ARC-10097-2] c07 N73-25160  
Optical signature generating and correlating apparatus  
[NASA-CASE-NPO-15226-1] c74 N81-19899
- TARGET RECOGNITION**  
Electronic background suppression field scanning sensor for detecting point source targets  
[NASA-CASE-XGS-05211] c07 N69-39980
- TARGET SIMULATORS**  
Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c74 N79-13855  
Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c32 N82-10286
- TARGETS**  
Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c31 N81-33319
- TECHNOLOGY UTILIZATION**  
Fuselage structure using advanced technology metal matrix fiber reinforced composites  
[NASA-CASE-LAB-11688-1] c05 N78-18045
- TEETH**  
Acoustic tooth cleaner  
[NASA-CASE-LAB-12471-1] c52 N81-12724
- TEFLON (TRADEMARK)**  
Reinforced FEP Teflon composite material diffusion bonded to metal substrate  
[NASA-CASE-MFS-20482] c15 N72-22492  
Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c36 N75-15029  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c44 N76-27664
- TELECOMMUNICATION**  
Adaptive compression signal processor for PCM communication systems  
[NASA-CASE-XLA-03076] c07 N71-11266  
Circuitry for generating sync signals in FM communication systems including video information  
[NASA-CASE-XNP-10830] c07 N71-11281  
Automatic estimation of signal to noise ratio and other parameters in signal communication systems  
[NASA-CASE-XNP-05254] c07 N71-20791  
Digital synchronizer for extracting binary data in receiver of PSK/PCM communication system  
[NASA-CASE-NFC-10851] c07 N71-24613  
Encoders designed to generate comma free biorthogonal Reed-Muller type code comprising conversion of 64 6-bit words into 64 32-bit data for communication purposes  
[NASA-CASE-NPO-10595] c10 N71-25917  
Multicarrier communications system for transmitting modulated signals from single transmitter  
[NASA-CASE-NPO-11548] c07 N73-26118  
Synchronized digital communication system  
[NASA-CASE-XNP-03623] c09 N73-28084  
Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NFO-11921-1] c32 N74-30523  
Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c35 N75-21582  
Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c32 N75-24981  
Secure communication system  
[NASA-CASE-MSC-16462-1] c32 N78-25274  
Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NFO-14444-1] c33 N81-15192

## TELEMETRY

Fabrication of pressure-telemetry transducers  
 [NASA-CASE-XNP-05752] c14 N69-21541  
 Telemetry data unit to form multibit words for use between demodulator and computer  
 [NASA-CASE-XNP-09225] c09 N69-24333  
 Development of telemetry system for position location and data acquisition  
 [NASA-CASE-GSC-10083-1] c30 N71-16090  
 Telespectrograph for analyzing upper atmosphere by tracking bodies reentering atmosphere at high velocities  
 [NASA-CASE-XLA-03273] c14 N71-18699  
 Digitally controlled frequency synthesizer for pulse frequency modulation telemetry systems  
 [NASA-CASE-XGS-02317] c09 N71-23525  
 Time division multiplexed telemetry transmitting system controlled by programmed memory  
 [NASA-CASE-GSC-10131-1] c07 N71-24624  
 Temperature telemetric transmitter with frequency determining tank circuit for short range transmission  
 [NASA-CASE-NPO-10649] c07 N71-24840  
 System designed to reduce time required for obtaining synchronization in data communication with spacecraft utilizing pseudonoise codes  
 [NASA-CASE-NPO-10214] c10 N71-26577  
 Zero power telemetry actuated switch for biomedical equipment  
 [NASA-CASE-ARC-10105] c09 N72-17153  
 Development and characteristics of telemetry system using computer-accessed circuits and remotely controlled from ground station  
 [NASA-CASE-NPO-11358] c07 N72-25172  
 Control and information system for digital telemetry data using analog converter to digitize sensed parameter values  
 [NASA-CASE-NPO-11016] c08 N72-31226  
 Characteristics of two channel telemetry system with two data rate channels for high and low data rate communication  
 [NASA-CASE-NPO-11572] c07 N73-16121  
 Improved phase lock loop for receiver in multichannel telemetry system with suppressed carrier  
 [NASA-CASE-NPO-11593-1] c07 N73-28012  
 Telemetry synchronizer  
 [NASA-CASE-GSC-11868-1] c17 N76-22245  
 Memory-based parallel data output controller  
 [NASA-CASE-GSC-12447-1] c60 N80-21987  
**TELEOPERATORS**  
 Cooperative multiaxis sensor for teleoperation of article manipulating apparatus  
 [NASA-CASE-NPO-13386-1] c54 N75-27758  
**TELEPHONES**  
 Telephone multiline signaling using common signal pair  
 [NASA-CASE-KSC-11023-1] c32 N79-23310  
**TELEPHONY**  
 Digital communication system  
 [NASA-CASE-MSC-13912-1] c32 N74-30524  
**TELESCOPES**  
 Pneumatic control of telescopic mirror support system  
 [NASA-CASE-XLA-03271] c11 N69-24321  
 Tracking mount for laser telescope employed in tracking large rockets and space vehicles to give information regarding azimuth and elevation  
 [NASA-CASE-MFS-14017] c14 N71-26627  
 Development of reflector system for application to line-of-sight pointing and tracking telescopes  
 [NASA-CASE-NPO-10468] c23 N71-33229  
 Design and development of light sensing device for controlling orientation of object relative to sun or other light source  
 [NASA-CASE-NPO-11201] c14 N72-27409  
 Borescope with adjustable hinged telescoping optical system  
 [NASA-CASE-MFS-15162] c14 N72-32452  
 Ritchey-Chretien telescope responsive to images located off telescope optical axis  
 [NASA-CASE-GSC-11487-1] c14 N73-30393  
 Servo-controlled intravitral microscope system  
 [NASA-CASE-NPO-13214-1] c35 N75-25123  
**TELETYPEWRITER SYSTEMS**  
 Teletypewriter video communication system and apparatus

[NASA-CASE-XNP-06611] c07 N71-26102  
**TELEVISION CAMERAS**  
 Electrically operated rotary shutter for television camera aboard spacecraft  
 [NASA-CASE-XNP-00637] c14 N70-40273  
 TV camera output signal control system for digital spacecraft communication  
 [NASA-CASE-XNP-01472] c14 N70-41807  
 Solid state television camera system consisting of monolithic semiconductor mosaic sensor and molecular digital readout systems  
 [NASA-CASE-XNP-06092] c07 N71-24612  
 Color television system for allowing monochrome television camera to produce color pictures  
 [NASA-CASE-MSC-12146-1] c07 N72-17109  
 TV fatigue crack monitoring system  
 [NASA-CASE-LAR-11490-1] c39 N78-16387  
 Optical conversion method --- for spacecraft television  
 [NASA-CASE-MSC-12618-1] c74 N78-17865  
**TELEVISION EQUIPMENT**  
 Conversion system for transforming slow scan rate of Apollo TV camera on moon to fast scan rate of commercial TV  
 [NASA-CASE-XMS-07168] c07 N71-11300  
 Automatic closed circuit television arc guidance control for welding joints  
 [NASA-CASE-MFS-13046] c07 N71-19433  
 Color television system utilizing single gun current sensitive color cathode ray tube  
 [NASA-CASE-ERC-10098] c09 N71-28618  
 Television multiplexing system, using single crystal controlled clock for signal synchronization  
 [NASA-CASE-KSC-10654-1] c07 N73-30115  
 Rotating raster generator  
 [NASA-CASE-PRC-10071-1] c32 N74-20813  
 Auditory display for the blind  
 [NASA-CASE-HCN-10832-1] c71 N74-21014  
 Spacecraft docking and alignment system --- using television camera system  
 [NASA-CASE-MSC-12559-1] c18 N76-14186  
 System for producing chroma signals  
 [NASA-CASE-MSC-14683-1] c74 N77-18893  
**TELEVISION RECEIVERS**  
 Improvements in receiver of narrow bandwidth television system  
 [NASA-CASE-XMS-06740-1] c07 N71-26579  
**TELEVISION SYSTEMS**  
 Electron beam scanning system for improved image definition and reduced power requirements for video signal transmission  
 [NASA-CASE-ERC-10552] c09 N71-12539  
 Development and characteristics of burst synchronization detection system  
 [NASA-CASE-XMS-05605-1] c10 N71-19468  
 Improvements in receiver of narrow bandwidth television system  
 [NASA-CASE-XMS-06740-1] c07 N71-26579  
 Stereoscopic television system, including projecting pair of binocular images  
 [NASA-CASE-ARC-10160-1] c23 N72-27728  
**TELEVISION TRANSMISSION**  
 Television simulation for aircraft and space flight  
 [NASA-CASE-XPR-03107] c09 N71-19449  
 Automatic frequency control for FM transmitter  
 [NASA-CASE-MFS-21540-1] c32 N74-19790  
 Television noise reduction device  
 [NASA-CASE-MSC-12607-1] c32 N75-21485  
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Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c44 N74-33379  
Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c44 N76-14595  
Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c44 N76-31667  
Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c44 N77-32581  
Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c44 N79-18443
- THERMAL EXPANSION**  
Gas valve operated by thermally expanding and contracting device  
[NASA-CASE-XLE-00815] c15 N70-35407  
Adjustable rigid mount for trihedral mirror formed of alloy with small coefficient of thermal expansion supporting screws and spring-biased plates  
[NASA-CASE-XNP-08907] c23 N71-29123  
Application of spiral, bimetallic strip to create circular motion on mechanical shaft by changing strip temperature  
[NASA-CASE-NPO-11283] c09 N72-25260  
Glass-to-metal seals comprising relatively high expansion metals

[NASA-CASE-LEW-10698-1] c37 N74-21063  
**THERMAL FATIGUE**  
 Automatic controlled thermal fatigue testing apparatus  
 [NASA-CASE-XLA-02059] c33 N71-24276  
**THERMAL INSULATION**  
 Low thermal loss piping arrangement for moving cryogenic media through double chamber structure  
 [NASA-CASE-XNP-08882] c15 N69-39535  
 Insulating system for receptacles of liquefied gases using wire cloth for forming frost layer  
 [NASA-CASE-XMF-00341] c15 N70-33323  
 Unfired-ceramic, highly reflective composite insulation for large launch vehicles.  
 [NASA-CASE-XMF-01030] c18 N70-41583  
 Carbon dioxide purge systems to prevent condensation in spaces between cryogenic fuel tanks and hypersonic vehicle skin  
 [NASA-CASE-XLA-01967] c31 N70-42015  
 Preparation and characteristics of lightweight refractory insulation,  
 [NASA-CASE-XMF-05279] c18 N71-16124  
 Development of thermal insulation system for wing and control surfaces of hypersonic aircraft and reentry vehicles  
 [NASA-CASE-XLA-06892] c33 N71-17897  
 Prefabricated multilayered self-evacuating insulation panels using gas with low vapor pressure at cryogenic temperatures for application to storage of cryogenics  
 [NASA-CASE-XLE-04222] c23 N71-22881  
 Light weight plastic foam thermal insulation for cryogenic storage  
 [NASA-CASE-XLE-02647] c18 N71-23658  
 Development of foam insulation for filament wound cryogenic storage tank  
 [NASA-CASE-XLE-03803] c15 N71-23816  
 Multilayer insulation panels for cryogenic liquid containers  
 [NASA-CASE-MFS-14023] c33 N71-25351  
 Double-wall isothermal cylinder containing heat transfer fluid thermal reservoir as spacecraft insulation cover  
 [NASA-CASE-MFS-20355] c33 N71-25353  
 Structure of fabric layers for micrometeoroid protection garment with capability for eliminating heat shorts for use in manufacturing space suits  
 [NASA-CASE-MSC-12109] c18 N71-26285  
 Foam insulation thickness measuring and injection device for spacecraft applications  
 [NASA-CASE-MFS-20261] c14 N71-27005  
 Development of thermal insulation material for insulating liquid hydrogen tanks in spacecraft  
 [NASA-CASE-XMF-05046] c33 N71-28892  
 Para-benzoguinone dioxide and concentrated mineral acid processed to yield intumescent or fire resistant, heat insulating materials  
 [NASA-CASE-ARC-10304-1] c18 N73-26572  
 Development and characteristics of thermal control system for maintaining constant temperature within spacecraft module with wide variations of component heat transfer  
 [NASA-CASE-GSC-11018-1] c31 N73-30829  
 Heater-mixer for stored fluids  
 [NASA-CASE-ARC-10442-1] c35 N74-15093  
 Intumescent composition, foamed product prepared therewith and process for making same  
 [NASA-CASE-ARC-10304-2] c27 N74-27037  
 High current electrical lead --- for thermionic converters  
 [NASA-CASE-LEW-10950-1] c33 N74-27683  
 Structural heat pipe --- for spacecraft wall thermal insulation system  
 [NASA-CASE-GSC-11619-1] c34 N75-12222  
 Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
 [NASA-CASE-MSC-14182-1] c27 N76-14264  
 Auger attachment method for insulation --- of spacecraft  
 [NASA-CASE-MSC-12615-1] c37 N76-19437  
 Flexible pile thermal barrier insulator  
 [NASA-CASE-MSC-19568-1] c34 N78-25350  
 Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
 [NASA-CASE-MSC-12619-2] c27 N79-12221

Diced tile thermal protection for spacecraft  
 [NASA-CASE-MSC-16366-1] c24 N79-23142  
 Fibrous refractory composite insulation --- shielding reusable spacecraft  
 [NASA-CASE-ARC-11169-1] c24 N79-24062  
 Thermal insulation protection means  
 [NASA-CASE-MSC-12737-1] c24 N79-25142  
 Installing fiber insulation  
 [NASA-CASE-MSC-16973-1] c37 N81-14317  
 Process for the preparation of polycarbonylphosphazenes --- thermal insulation  
 [NASA-CASE-ARC-11176-2] c27 N81-27271  
 High temperature glass thermal control structure and coating  
 [NASA-CASE-ARC-11164-1] c27 N82-10228  
**THERMAL PLASMAS**  
 Apparatus for producing monochromatic light from continuous plasma source  
 [NASA-CASE-XNP-04167-2] c25 N72-24753  
**THERMAL PROTECTION**  
 Thermoprotective device for balances  
 [NASA-CASE-XAC-00648] c14 N70-40400  
 Design, development, and characteristics of ablation structures  
 [NASA-CASE-XMS-01816] c33 N71-15623  
 Development of spacecraft radiator cover  
 [NASA-CASE-MSC-12049] c31 N71-16080  
 Characteristics of foamed-in-place ceramic refractory insulating material and method of fabrication  
 [NASA-CASE-XGS-02435] c18 N71-22998  
 Unfired ceramic insulation for protection from radiant heating environments  
 [NASA-CASE-MFS-14253] c33 N71-24858  
 Development of solid state polymer coating for obtaining thermal balance in spacecraft components  
 [NASA-CASE-XLA-01745] c33 N71-28903  
 Anodizing method for providing metal surfaces with temperature reducing coatings against flames  
 [NASA-CASE-XLE-00035] c33 N71-29151  
 Ablative heat shield for protection from aerodynamic heating of reentry spacecraft  
 [NASA-CASE-MSC-12143-1] c33 N72-17947  
 Lightweight fire resistant plastic foam for thermal protection of reentry vehicles and aircraft structures  
 [NASA-CASE-ARC-10180-1] c28 N72-20767  
 Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
 [NASA-CASE-ARC-10180-1] c27 N74-12814  
 Adjustable securing base  
 [NASA-CASE-MSC-19666-1] c37 N78-17383  
 Reaction cured glass and glass coatings  
 [NASA-CASE-ARC-11051-1] c27 N78-32260  
 Diced tile thermal protection for spacecraft  
 [NASA-CASE-MSC-16366-1] c24 N79-23142  
 Multiwall thermal protection system  
 [NASA-CASE-LAR-12620-1] c24 N80-12117  
 Improved attachment system for silica tiles --- thermal protection for space shuttle orbiter  
 [NASA-CASE-MSC-18741-1] c16 N81-16110  
 Thermal barrier coating system having improved adhesion  
 [NASA-CASE-LEW-13359-1] c27 N81-24265  
 Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
 [NASA-CASE-LEW-13088-1] c26 N81-25188  
 Thermal control coatings based on trialkoxysilane hydrolysate binders --- tolerance to ultraviolet radiation in vacuum  
 [NASA-CASE-MFS-25620-1] c24 N82-11118  
**THERMAL RADIATION**  
 Miniaturized radiometer for detecting low level thermal radiation  
 [NASA-CASE-XLA-04556] c14 N69-27484  
 Temperature sensitive capacitor device for detecting very low intensity infrared radiation  
 [NASA-CASE-XNE-09750] c14 N69-39937  
 High temperature source of thermal radiation  
 [NASA-CASE-XLE-00490] c33 N70-34545  
 Development and characteristics of thermal radiation shielding of refractory metal foil used for induction furnace  
 [NASA-CASE-XLE-03432] c33 N71-24145  
 Black body cavity radiometer with thermal resistance wire bridge circuit



[NASA-CASE-XNP-08961] c14 N71-24809  
Development of method for protecting large and  
oddly shaped areas from radiant and convective  
heat  
[NASA-CASE-XNP-01310] c33 N71-28652

**THERMAL REACTORS**  
Non-equilibrium radiation nuclear reactor  
[NASA-CASE-BQN-10841-1] c73 N78-19920

**THERMAL RESISTANCE**  
Single electrical circuit component combining  
diode, fuse, and blown indicator with  
elongated tube of heat resistant transparent  
material  
[NASA-CASE-XKS-03381] c09 N71-22796  
Polyimide foam for the thermal insulation and  
fire protection  
[NASA-CASE-ARC-10464-1] c27 N74-12812  
Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c34 N74-15652  
Self-regulating proportionally controlled  
heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c77 N75-20140  
Heat resistant polymers of oxidized  
styrylphosphine  
[NASA-CASE-MSC-14903-1] c27 N78-32256  
Ambient cure polyimide foams --- thermal  
resistant foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215  
The 1,2,4-oxadiazole elastomers --- heat  
resistant polymers  
[NASA-CASE-ARC-11253-1] c27 N81-17262  
High stability amplifier  
[NASA-CASE-GSC-12646-1] c33 N81-32391

**THERMAL SHOCK**  
Development of equipment for measuring thermal  
shock resistance of thin discs of material  
[NASA-CASE-XLE-02024] c14 N71-22964  
Thermal shock resistant hafnia ceramic materials  
[NASA-CASE-LAR-10894-1] c18 N73-14584  
Thermal shock and erosion resistant tantalum  
carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206  
Laser surface fusion of plasma sprayed ceramic  
turbine seals  
[NASA-CASE-LEW-13269-1] c27 N81-22190

**THERMAL SIMULATION**  
Simulating operation of thermopile vacuum gage  
tube at high and low pressures  
[NASA-CASE-XLA-02758] c14 N71-18481

**THERMAL STABILITY**  
Bonded solid lubricant coatings of calcium  
fluoride and binder for high temperature  
stability  
[NASA-CASE-XMS-00259] c18 N70-36400  
Portable environmental control and life support  
system for astronaut in and out of spacecraft  
[NASA-CASE-XMS-05632-1] c05 N71-11203  
Chemical synthesis of thermally stable  
organometallic polymers with divalent metal  
ion and tetraphenylphosphonitrilic units  
[NASA-CASE-BQN-10364] c06 N71-27363  
Cermets for nuclear fuel constructed by pressing  
metal coated ceramic particles in die at  
temperature to cause bonding of metal  
coatings, and tested for thermal stability  
[NASA-CASE-LEW-10219-1] c18 N71-28729  
Ultraviolet and thermally stable polymer  
compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156  
Ultraviolet and thermally stable polymer  
compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315  
Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c71 N79-14871  
Infusible silazane polymer and process for  
producing same --- protective coatings  
[NASA-CASE-XMF-02526-1] c27 N79-21190  
Catalytic trimerization of aromatic nitriles and  
triaryl-s-triazine ring cross-linked high  
temperature resistant polymers and copolymers  
made thereby  
[NASA-CASE-LEW-12053-2] c27 N79-28307  
Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c27 N82-11206

**THERMAL STRESSES**  
Strain gage for detecting and measuring  
mechanical strain in thermally strained  
specimens  
[NASA-CASE-FRC-10053] c14 N70-35587

Multilegged support system for wind tunnel test  
models subjected to thermal dynamic loading  
[NASA-CASE-XLA-01326] c11 N71-21481  
Development of device for simulating cyclic  
thermal loading of flexible materials by  
application of mechanical stresses and  
deformations  
[NASA-CASE-LAR-10270-1] c32 N72-25877  
Apparatus and method for reducing thermal stress  
in a turbine rotor  
[NASA-CASE-LEW-12232-1] c07 N79-10057  
Method for alleviating thermal stress damage in  
laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c24 N81-17170  
Method for alleviating thermal stress damage in  
laminates  
[NASA-CASE-LEW-12493-2] c24 N81-26179

**THERMIONIC CATHODES**  
Thermionic cesium diode converter with cavity  
emitters  
[NASA-CASE-NPO-10412] c09 N71-28421

**THERMIONIC CONVERTERS**  
Vacuum thermionic converter with short-circuited  
triodes and increased electron transmission  
and conversion efficiency  
[NASA-CASE-XLE-01015] c03 N69-39898  
Thermionic converter for converting heat energy  
directly into electrical energy  
[NASA-CASE-XLE-01903] c22 N71-23599  
Thermionic cesium diode converter with cavity  
emitters  
[NASA-CASE-NPO-10412] c09 N71-28421  
Development and characteristics of solar cells  
with phosphors in cover glass to improve  
response to solar ultraviolet radiation  
[NASA-CASE-ARC-10050] c03 N71-33409  
Reactor heated in-core diodes for energy  
conversion  
[NASA-CASE-NPO-10542] c09 N72-27228  
High current electrical lead --- for thermionic  
converters  
[NASA-CASE-LEW-10950-1] c33 N74-27683  
Electric power generation system directory from  
laser power  
[NASA-CASE-NFC-13308-1] c36 N75-30524  
Nuclear thermionic converter ---  
tungsten-thorium oxide rods  
[NASA-CASE-NFO-13121-1] c73 N77-18891  
Cesium thermionic converters having improved  
electrodes  
[NASA-CASE-LEW-12038-3] c44 N78-25555  
High thermal power density heat transfer ---  
thermionic converters  
[NASA-CASE-LEW-12950-1] c34 N82-11399

**THERMIONIC DIODES**  
Electric power system utilizing thermionic  
plasma diodes in parallel and heat pipes as  
cathodes  
[NASA-CASE-XMF-05843] c03 N71-11055  
Thermionic diode switch for use in high  
temperature region to chop current from dc  
source  
[NASA-CASE-NPO-10404] c03 N71-12255  
Micromicroampere current measuring circuit, with  
two subminiature thermionic diodes with  
filament cathodes  
[NASA-CASE-XNP-00384] c09 N71-13530  
Electric power system with thermionic diodes and  
circulatory liquid metal coolant lines  
[NASA-CASE-NFS-14114] c33 N71-27862  
Reactor heated in-core diodes for energy  
conversion  
[NASA-CASE-NPO-10542] c09 N72-27228

**THERMIONIC EMITTERS**  
Oxygen-doped tantalum emitter for thermionic  
devices such as cesium vapor diodes  
[NASA-CASE-NPO-11138] c03 N70-34646

**THERMIONIC POWER GENERATION**  
Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c73 N78-28913  
Improved thermionic energy converters  
[NASA-CASE-LEW-12443-1] c44 N81-19561

**THERMISTORS**  
Matched thermistors for microwave power meters  
with compensation for temperature changes  
[NASA-CASE-NPO-10348] c10 N71-12554  
Thermistor holder for skin temperature  
measurements  
[NASA-CASE-ARC-10855-1] c52 N77-10780



- Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c35 N79-33449
- Directional flow sensor  
[NASA-CASE-FRC-11074-1] c35 N82-11436
- THERMOCHROMATIC MATERIALS**
- Thermochromic compositions for detecting heat levels in electronic circuits and devices  
[NASA-CASE-NFO-10764-1] c14 N73-14428
- Heat detection and compositions and devices therefor  
[NASA-CASE-NFO-10764-2] c35 N75-25122
- THERMOCOUPLE PYROMETERS**
- Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c34 N74-15652
- THERMOCOUPLES**
- Heat flux sensor assembly with proviso for heat shield to reduce radiative transfer between sensor elements  
[NASA-CASE-XMS-05909-1] c14 N69-27459
- Gas cooled high temperature thermocouple  
[NASA-CASE-XLE-09475-1] c33 N71-15568
- Control of fusion welding through use of thermocouple wire  
[NASA-CASE-MFS-06074] c15 N71-20393
- Heat sensing instrument, using thermocouple junction connected under heavy conducting material  
[NASA-CASE-XLA-01551] c14 N71-22989
- Design and characteristics of thermocouples consisting of flexible tape for improved attachment to temperature source  
[NASA-CASE-XNP-01659] c14 N71-23039
- Mixed liquid and vapor phase analyzer design with thermocouples for relative heat transfer measurement  
[NASA-CASE-NFO-10691] c14 N71-26199
- Development of thermocouple instrument for measuring temperature of wall heated by flowing fluid without disturbing boundary layer  
[NASA-CASE-XLE-05230] c14 N72-27410
- Thermocouple apparatus for measuring wall temperatures in regeneratively cooled rocket engines having thin walled cooling passages  
[NASA-CASE-XLE-05230-2] c14 N73-13417
- Electrical resistance butt welder for welding fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c15 N73-14468
- Development of flexible thermocouple in form of tape for adaptation to special temperature measuring conditions  
[NASA-CASE-LEW-11072-1] c14 N73-24472
- Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c35 N76-15434
- Thermocouple installation  
[NASA-CASE-NFO-13540-1] c35 N77-14409
- Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c35 N77-32454
- Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c35 N79-14346
- Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c35 N81-26431
- THERMODYNAMIC EFFICIENCY**
- Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c37 N81-29442
- THERMODYNAMIC PROPERTIES**
- Development of equipment for measuring thermal shock resistance of thin discs of material  
[NASA-CASE-XLE-02024] c14 N71-22964
- Characteristics of foamed-in-place ceramic refractory insulating material and method of fabrication  
[NASA-CASE-XGS-02435] c18 N71-22998
- Operating properties of superconducting magnet in vacuum environment  
[NASA-CASE-XNP-06503] c23 N71-29049
- Cobalt-tungsten alloys with superior strength at elevated temperatures  
[NASA-CASE-LEW-10436-1] c17 N73-32415
- THERMOELECTRIC GENERATORS**
- Use of silicon controlled rectifier shorting circuit to protect thermoelectric generator source from thermal destruction  
[NASA-CASE-XGS-04808] c03 N69-25146
- Procedure for segmenting lead telluride and silicon germanium thermoelectric elements to obtain composite elements effective over wide temperature range  
[NASA-CASE-XGS-05718] c26 N71-16037
- Low weight, integrated thermoelectric generator/antenna combination for spacecraft  
[NASA-CASE-XER-09521] c09 N72-12136
- Thermally cascaded thermoelectric generator with radioisotopic heat source  
[NASA-CASE-NFO-10753] c03 N72-26031
- THERMOELECTRIC MATERIALS**
- Bonding method for improving contact between lead telluride thermoelectric elements and tungsten electrodes  
[NASA-CASE-XGS-04554] c15 N69-39786
- Procedure for segmenting lead telluride and silicon germanium thermoelectric elements to obtain composite elements effective over wide temperature range  
[NASA-CASE-XGS-05718] c26 N71-16037
- THERMOELECTRIC POWER GENERATION**
- Thermoelectric power conversion by liquid metal flowing through magnetic field  
[NASA-CASE-XNP-00644] c03 N70-36803
- Operation method for combined electrolysis device and fuel cell using molten salt to produce power by thermoelectric regeneration mechanism  
[NASA-CASE-XLE-01645] c03 N71-20904
- Thermoelectric power system --- for spacecraft  
[NASA-CASE-MFS-22002-1] c44 N76-16612
- THERMOELECTRICITY**
- Development of flexible thermocouple in form of tape for adaptation to special temperature measuring conditions  
[NASA-CASE-LEW-11072-1] c14 N73-24472
- Device for measuring thermoelectric properties of materials under high pressure  
[NASA-CASE-NFO-11749] c14 N73-28486
- THERMOLUMINESCENCE**
- Method for detecting oxygen in gas by thermoluminescence  
[NASA-CASE-LAR-10668-1] c06 N73-16106
- Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c25 N78-15210
- THERMOMAGNETIC EFFECTS**
- Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NFO-11317-2] c36 N74-13205
- Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NFO-10872-1] c35 N79-16246
- THERMOMETERS**
- Platinum resistance thermometer circuit  
[NASA-CASE-MSC-12327-1] c35 N77-27368
- THERMOPHYSICAL PROPERTIES**
- Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c25 N74-18551
- Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c09 N77-27131
- THERMOPILES**
- Differential thermopile for measuring cooling water temperature rise  
[NASA-CASE-XAC-00812] c14 N71-15598
- Horizon sensor design with digital sampling of spaced radiation-compensated thermopile infrared detectors  
[NASA-CASE-XNF-06957] c14 N71-21088
- Development of thermopile with sensor surface to receive radiant energy and to provide measurement of energy quantity  
[NASA-CASE-NFO-11493] c14 N73-12447
- THERMOPLASTIC RESINS**
- Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c27 N78-31233
- Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NFO-08835-1] c27 N78-33228
- One step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c37 N80-11469

- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c27 N81-14076
- Thermoset-thermoplastic aromatic polyamides  
[NASA-CASE-LAR-12723-1] c27 N81-15107
- THERMOPLASTICITY**  
Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c27 N78-32261
- THERMOREGULATION**  
Thermoregulating with cooling flow pipe network for humans  
[NASA-CASE-XMS-10269] c05 N71-24147
- THERMOSETTING RESINS**  
Vacuum method for molding thermosetting compounds used as ablative materials  
[NASA-CASE-XLA-01091] c15 N71-10672
- Procedure for bonding polytetrafluoroethylene thermal protective sleeves to magnesium alloy conical shell components with different thermal coefficients  
[NASA-CASE-XLA-01262] c15 N71-21404
- Method for honeycomb panel bonding by thermosetting film adhesive with electrical heat means  
[NASA-CASE-XMF-01402] c18 N71-21651
- Heat treatment and tooling for forming shapes from thermosetting honeycomb core sheets  
[NASA-CASE-NPO-11036] c15 N72-24522
- Fluorinated polyurethanes produced by reacting hydroxy terminated perfluoro polyether with diisocyanate  
[NASA-CASE-NPO-10767-2] c06 N72-27151
- Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c31 N74-14133
- Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c31 N74-18124
- Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c31 N75-13111
- Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c24 N80-26388
- Thermoset-thermoplastic aromatic polyamides  
[NASA-CASE-LAR-12723-1] c27 N81-15107
- Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c27 N81-24258
- THERMOSTATS**  
Thermal switch for transferring excess heat from one region to another heat dissipating one  
[NASA-CASE-XNP-00463] c33 N70-36847
- Design and development of linear actuator based on bimetallic spring expansion  
[NASA-CASE-NPO-10637] c15 N72-12409
- Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c44 N76-14602
- Automatic thermal switch  
[NASA-CASE-GSC-12553-1] c33 N80-21671
- THICK FILMS**  
Material compositions and processes for developing dielectric thick films used in microcircuit capacitors  
[NASA-CASE-LAR-10294-1] c26 N72-28762
- THICKNESS**  
Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c52 N76-25895
- Thickness measurement system  
[NASA-CASE-MFS-23721-1] c31 N79-28370
- Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c27 N80-16163
- THIN FILMS**  
Temperature sensitive capacitor device for detecting very low intensity infrared radiation  
[NASA-CASE-XNP-05750] c14 N69-39537
- Means and methods of depositing thin films on substrates  
[NASA-CASE-XNP-00595] c15 N70-34967
- Method of forming thin window drifted silicon charged particle detector  
[NASA-CASE-XLE-00808] c24 N71-10560
- Describing apparatus used in vacuum deposition of thin film inductive windings for spacecraft microcircuitry  
[NASA-CASE-XMF-01667] c15 N71-17647
- Describing method for vapor deposition of gallium arsenide films to manganese substrates to provide semiconductor devices with low resistance substrates  
[NASA-CASE-XNP-01328] c26 N71-18064
- Development of stable electronic amplifier adaptable for monolithic and thin film construction  
[NASA-CASE-XGS-02812] c09 N71-19466
- Spatter proof evaporant source design for use in vacuum deposition of solid thin films on substrates  
[NASA-CASE-XMF-06065] c15 N71-20395
- Binding layer of semiconductor particles by electrodeposition  
[NASA-CASE-XNP-01959] c26 N71-23043
- Device for high vacuum film deposition with electromagnetic ion steering  
[NASA-CASE-NPO-10331] c09 N71-26701
- Magnetic recording head composed of ferrite core coated with thin film of aluminum-iron-silicon alloy  
[NASA-CASE-GSC-10097-1] c08 N71-27210
- Thin film capacitive bolometer and capacitance temperature interchange sensor  
[NASA-CASE-NPO-10607] c09 N71-27232
- Electrical connections for thin film hybrid microcircuits  
[NASA-CASE-XMS-02182] c10 N71-28783
- Single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c09 N72-22199
- Waveguide, thin film window and microwave irises  
[NASA-CASE-LAR-10513-1] c07 N72-25170
- Thin absorbing metallic film for increased visible light transmission  
[NASA-CASE-LAR-10836-1] c26 N72-27784
- Development of thin film microwave iris installed in microwave waveguide transverse to flow of energy in waveguide  
[NASA-CASE-LAR-10511-1] c09 N72-29172
- Development of procedure for producing thin transparent films of zinc oxide on transparent refractory substrate  
[NASA-CASE-FRC-10019] c15 N73-12487
- Process for analysis of strain field of structures subjected to large deformations involving low modulus substrate with thin coating  
[NASA-CASE-LAR-10765-1] c32 N73-20740
- Dual wavelength system for monitoring film deposition  
[NASA-CASE-MFS-20675] c26 N73-26751
- Thin film analyzer utilizing holographic techniques  
[NASA-CASE-MFS-20823-1] c16 N73-30476
- Transparent switchboard which permits optical display devices to be adapted for use in man machine communications  
[NASA-CASE-MSC-13746-1] c10 N73-32143
- Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c25 N74-18551
- Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c25 N75-12087
- System for depositing thin films  
[NASA-CASE-MFS-20775-1] c31 N75-12161
- Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c36 N75-15029
- Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c31 N76-31365
- Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c37 N78-13436
- Strong thin membrane structure --- solar sails  
[NASA-CASE-NFC-14021-2] c27 N80-16163
- Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-1] c26 N80-19237
- Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c24 N81-14000
- THIN PLATES**  
Dichroic plate --- as bandpass filters

[NASA-CASE-NPO-13506-1] c35 N76-15435  
Adjustable securing base  
[NASA-CASE-MSC-19666-1] c37 N78-17383

**THIN WALLED SHELLS**  
Thin walled pressure test vessel using  
low-melting alloy-filled joint to attach shell  
to heads  
[NASA-CASE-XLE-04677] c15 N71-10577

**THIN WALLS**  
Channel-type shell construction for rocket  
engines and related configurations  
[NASA-CASE-XLE-00144] c28 N70-34860  
Sealed separable connection for thin wall metal  
tube  
[NASA-CASE-NPO-10064] c15 N71-17693  
Low mass truss structure with elongated  
thin-walled tubular segments  
[NASA-CASE-LAR-10546-1] c11 N72-25287  
Development of differential pressure control  
system using motion of mechanical diaphragms  
to operate electric switch  
[NASA-CASE-MPS-14216] c14 N73-13418  
Method of fabricating an article with cavities  
--- with thin bottom walls  
[NASA-CASE-LAR-10318-1] c31 N74-18089  
Method of fabricating an object with a thin wall  
having a precisely shaped slit  
[NASA-CASE-LAR-10409-1] c31 N74-21059

**THORIUM FLUORIDES**  
Ultraviolet filter of thorium fluoride and  
cryolite on quartz base  
[NASA-CASE-XNP-02340] c23 N69-24332

**THORIUM OXIDES**  
Nuclear thermionic converter ---  
tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c73 N77-18891

**THREADS**  
Gage for quality control of sealing surfaces of  
threaded boss  
[NASA-CASE-XNP-04566] c14 N71-17658  
Threadless fastener apparatus comprising  
receiving apertures for plurality of articles,  
self-locked condition, and capable of using  
nonmalleable materials in both ends  
[NASA-CASE-XPR-05302] c15 N71-23254

**THREE DIMENSIONAL MOTION**  
Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c08 N74-10942

**THRESHOLD GATES**  
Apparatus with summing network for compression  
of analog data by decreasing slope threshold  
sampling  
[NASA-CASE-NPO-10769] c08 N72-11171  
Radiation hardening of MOS devices by boron ---  
for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c76 N75-25730

**THRESHOLD LOGIC**  
Silicon controlled rectifier pulse gate  
amplifier for blocking false gating caused by  
negative transient voltages  
[NASA-CASE-XLA-07497] c09 N71-12514

**THROATS**  
Method of making a rocket nozzle  
[NASA-CASE-XNP-06884-1] c20 N79-21123

**THRUST AUGMENTATION**  
Exhaust nozzle with afterburning for generating  
thrust  
[NASA-CASE-XLA-00154] c28 N70-33374  
Construction and method of arranging plurality  
of ion engines to form cluster thereby  
increasing efficiency and control by  
decreasing heat radiated to space  
[NASA-CASE-XNP-02923] c28 N71-23081  
Reversed cowl flap inlet thrust augmentor ---  
with adjustable airfoil  
[NASA-CASE-ABC-10754-1] c07 N75-24736  
Method and apparatus for rapid thrust increases  
in a turbofan engine  
[NASA-CASE-LEW-12971-1] c07 N80-18039  
Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c08 N81-19130

**THRUST BEARINGS**  
Thrust bearing  
[NASA-CASE-LEW-11949-1] c37 N76-29588

**THRUST CHAMBER PRESSURE**  
Pitch attitude stabilization system utilizing  
engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c08 N81-26152

**THRUST CHAMBERS**

Rocket chamber leak test fixture using tubular  
plug  
[NASA-CASE-XPR-09479] c14 N69-27503  
Supporting and protecting frame structure and  
plug for empty thrust chamber assembly,  
handling, and shipping  
[NASA-CASE-XMI-00580] c11 N70-35383  
Large area-ratio nozzles for rocket motor thrust  
chambers  
[NASA-CASE-XLE-00145] c28 N70-36806  
Method for shaping regeneratively cooled rocket  
motor casing having minimum thickness at each  
channel cross section  
[NASA-CASE-XLE-00409] c28 N71-15658  
Regeneratively cooled rocket motor casing with  
tapered channels to insure minimum thicknesses  
at each channel cross section for necessary  
strength requirements  
[NASA-CASE-XLE-05689] c28 N71-15659  
Rocket engine injector orifice to accommodate  
changes in density, velocity, and pressure,  
thereby maintaining constant mass flow rate of  
propellant into rocket combustion chamber  
[NASA-CASE-XLE-03157] c28 N71-24736  
Fuel and oxidizer injection head for thrust  
chamber of reaction engine  
[NASA-CASE-NFO-10046] c28 N72-17843  
Continuous gas flow control by fluidic  
proportional thruster system  
[NASA-CASE-ABC-10106-1] c28 N72-22769  
Radial magnetic field for ion thruster  
[NASA-CASE-LEW-10770-1] c28 N72-22770  
Thermal flux transfer system for maintaining  
thrust chamber of operative reaction motor at  
given temperatures  
[NASA-CASE-NFO-12070-1] c28 N73-32606  
Heat exchanger --- rocket combustion chambers  
and cooling systems  
[NASA-CASE-LEW-12252-1] c34 N79-13288  
Heat exchanger and method of making --- bonding  
rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c34 N79-13289

**THRUST CONTROL**  
Electromechanical actuator and its use in rocket  
thrust control valve  
[NASA-CASE-XNP-05975] c15 N69-23185  
Solid propellant rocket vehicle thrust control  
method and apparatus  
[NASA-CASE-XNP-00217] c28 N70-38181  
Thrust and attitude control apparatus using jet  
nozzle in movable canard surface or fin  
configuration  
[NASA-CASE-XLE-03583] c31 N71-17629  
Detonation reaction engine comprising outer  
housing enclosing pair of inner walls for  
continuous flow  
[NASA-CASE-XNP-06926] c28 N71-22983  
Low mass ionizing device for use in electric  
thrust spacecraft engines  
[NASA-CASE-XNP-01954] c28 N71-28850  
Heated porous plug microthruster for spacecraft  
reaction jet controlled systems such as fuel  
flow regulation, propellant disassociation,  
and heat transfer augmentation  
[NASA-CASE-GSC-10640-1] c28 N72-18766  
Multi-purpose wind tunnel reaction control model  
block  
[NASA-CASE-MSC-19706-1] c09 N78-31129  
Fluid thrust control system --- for liquid  
propellant rocket engines  
[NASA-CASE-XNP-05964-1] c20 N79-21124

**THRUST LOADS**  
Thrust measurement  
[NASA-CASE-XMS-05731] c35 N75-29382

**THRUST MEASUREMENT**  
Dynamometer measuring microforce thrust produced  
by ion engine  
[NASA-CASE-XLE-00702] c14 N70-40203  
Development of thrust dynamometer for measuring  
performance of jet and rocket engines  
[NASA-CASE-XLE-05260] c14 N71-20429  
Development of temperature compensated thrust  
measuring gage for measuring forces as  
function of time in environment with varying  
temperature  
[NASA-CASE-XGS-02319] c14 N71-22965  
Micro-pound extended range thrust stand for  
small rocket engines

[NASA-CASE-GSC-10710-1] c28 N71-27094  
**THRUST VECTOR CONTROL**  
 Thrust vector control by secondary injection of fluid into rocket nozzle flow field to separate exhaust flow  
 [NASA-CASE-XLE-00208] c28 N70-34294  
 High velocity guidance and spin stabilization gyro controlled jet reaction system for launch vehicle payloads  
 [NASA-CASE-XLA-01339] c31 N71-15692  
 Ion beam deflector system for electronic thrust vector control for ion propulsion yaw, pitch, and roll forces  
 [NASA-CASE-LEW-10689-1] c28 N71-26173  
 Tertiary flow injection system for thrust vectoring of propulsive nozzle flow  
 [NASA-CASE-MFS-20831] c28 N71-29153  
 Development of thrust control system for application to control of aircraft and spacecraft  
 [NASA-CASE-MSC-13397-1] c21 N72-25595  
 Development of vortex fluid amplifier for throttling rocket exhaust  
 [NASA-CASE-LEW-10374-1] c28 N73-13773  
 System for imposing directional stability on a rocket-propelled vehicle  
 [NASA-CASE-MFS-21311-1] c20 N76-21275  
**THRUST-WEIGHT RATIO**  
 Launch pad missile release system with bending moment change rate reduction in thrust distribution structure at liftoff  
 [NASA-CASE-XNP-03198] c30 N70-40353  
**THYRISTORS**  
 Electrical power generating system --- for windpowered generation  
 [NASA-CASE-MFS-24368-3] c33 N81-22280  
**FILES**  
 Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
 [NASA-CASE-MSC-14182-1] c27 N76-14264  
 Diced tile thermal protection for spacecraft  
 [NASA-CASE-MSC-16366-1] c24 N79-23142  
 Improved attachment system for silica tiles --- thermal protection for space shuttle orbiter  
 [NASA-CASE-MSC-18741-1] c16 N81-16110  
 Apparatus for accurately preloading auger attachment means for frangible protective material  
 [NASA-CASE-MSC-18791-1] c37 N81-24446  
 Densification of porous refractory substrates --- space shuttle orbiter tiles  
 [NASA-CASE-MSC-18737-1] c25 N81-29180  
 Method of repairing surface damage to porous refractory substrates --- shuttle orbiter tiles  
 [NASA-CASE-MSC-18736-1] c27 N81-29231  
**TILT WING AIRCRAFT**  
 Free wing assembly for an aircraft  
 [NASA-CASE-FRC-10092-1] c05 N79-12061  
**TIME CONSTANT**  
 Variable time constant, wide frequency range smoothing network for noise removal from pulse chains  
 [NASA-CASE-XGS-01983] c10 N70-41964  
**TIME DEPENDENCE**  
 An instrument for determining coincidence and elapse time between independent sources of random sequential events  
 [NASA-CASE-LAR-12531-1] c35 N81-31529  
**TIME DISCRIMINATION**  
 Extra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit  
 [NASA-CASE-XGS-00381] c09 N70-34819  
**TIME DIVISION MULTIPLEXING**  
 Synchronizing apparatus for multi-access satellite time division multiplex system  
 [NASA-CASE-XGS-05918] c07 N69-39974  
 Time division multiplexer with magnetic latching relays  
 [NASA-CASE-XNP-00431] c09 N70-38998  
 Data processor having multiple sections activated at different times by selective power coupling to sections  
 [NASA-CASE-XGS-04767] c08 N71-12494  
 Minimum time delay unit for conventional time multiplexed data compression channels  
 [NASA-CASE-XNP-08832] c08 N71-12506

Time division relay synchronizer with master sync pulse for activating binary counter to produce signal identifying time slot for station  
 [NASA-CASE-GSC-10373-1] c07 N71-19773  
 Sampling circuit for signal processing in multiplex transmission by Fourier analysis  
 [NASA-CASE-NPO-10388] c07 N71-24622  
 Time division multiplexed telemetry transmitting system controlled by programmed memory  
 [NASA-CASE-GSC-10131-1] c07 N71-24624  
**TIME FUNCTIONS**  
 Cathode ray oscilloscope for analyzing electrical waveforms representing amplitude distribution of time function  
 [NASA-CASE-XNP-01383] c09 N71-10659  
**TIME LAG**  
 Closed loop radio communication ranging system to determine distance between moving airborne vehicle and fixed ground station  
 [NASA-CASE-XNP-01501] c21 N70-41930  
 Minimum time delay unit for conventional time multiplexed data compression channels  
 [NASA-CASE-XNP-08832] c08 N71-12506  
 Apparatus for estimating amplitude and sign of phase difference or time lag between two signals  
 [NASA-CASE-NFO-11203] c10 N72-20224  
 Automatic transponder --- measurement of the internal delay time of a transponder  
 [NASA-CASE-GSC-12075-1] c32 N77-31350  
 Time delay and integration detectors using charge transfer devices  
 [NASA-CASE-GSC-12324-1] c33 N81-33403  
**TIME MEASUREMENT**  
 Time domain phase measuring apparatus  
 [NASA-CASE-GSC-12228-1] c33 N79-10338  
**TIME MEASURING INSTRUMENTS**  
 Mechanism for measuring nanosecond time differences between luminous events using streak camera  
 [NASA-CASE-XLA-01987] c23 N71-23976  
**TIME OF FLIGHT SPECTROMETERS**  
 Design and characteristics of time of flight mass spectrometer to measure or analyze gases at low pressures and time of flight of single gas molecule  
 [NASA-CASE-XNP-01056] c14 N71-23041  
**TIME SERIES ANALYSIS**  
 Device for performing statistical time-series analysis of complex electrical signal waveforms  
 [NASA-CASE-MSC-12428-1] c10 N73-25240  
**TIME SHARING**  
 Integrated time shared instrumentation display for aerospace vehicle simulators  
 [NASA-CASE-XLA-01952] c08 N71-12507  
**TIME SIGNALS**  
 Monitoring system for signal amplitude ranges over predetermined time interval  
 [NASA-CASE-XMS-04061-1] c09 N69-39885  
 Development of method for synchronizing clocks at several ground stations based on signals received from spacecraft or satellites  
 [NASA-CASE-XNP-08875] c10 N71-23099  
 Time synchronization system for synchronizing clocks at remote locations with master clock using moon reflected coded signals  
 [NASA-CASE-NPO-10143] c10 N71-26326  
 Circuit for measuring wide range of pulse rates by utilizing high capacity counter  
 [NASA-CASE-XNP-06234] c10 N71-27137  
 System for generating timing and control signals  
 [NASA-CASE-NPO-13125-1] c33 N75-19519  
 Precise RF timing signal distribution to remote stations --- fiber optics  
 [NASA-CASE-NPO-14749-1] c32 N81-14186  
**TIMING DEVICES**  
 Design and development of synchronous servo loop control system  
 [NASA-CASE-XNP-03744] c10 N71-20448  
 Development of method for synchronizing clocks at several ground stations based on signals received from spacecraft or satellites  
 [NASA-CASE-XNP-08875] c10 N71-23099  
 Development and characteristics of resettable monostable pulse generator with charge rundown-timing circuit  
 [NASA-CASE-GSC-11139] c09 N71-27016  
 Data acquisition and processing system with buffer storage and timing device for magnetic tape recording of PCM data and timing

- informatics  
[NASA-CASE-NPO-12107] c08 N71-27255  
High speed photo-optical time recorder for  
indicating time at exposure of each frame of  
high speed movie camera film  
[NASA-CASE-KSC-10294] c14 N72-18411  
Method of and apparatus for double-exposure  
holographic interferometry  
[NASA-CASE-MFS-25405-1] c35 N81-27459
- TIRES**  
Temperature sensor warning system for pneumatic  
tires of aircraft and ground vehicles  
[NASA-CASE-XLA-01926] c14 N71-15620  
Resilient wheel design with woven wire tire and  
abrasive treads for lunar surface vehicles  
[NASA-CASE-MFS-13929] c15 N71-27091
- TISSUES (BIOLOGY)**  
Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c35 N75-25123  
Method and system for in vivo measurement of  
bone tissue using a twc level energy source  
[NASA-CASE-MSC-14276-1] c52 N77-14737  
System for and method of freezing biological  
tissue  
[NASA-CASE-GSC-12173-1] c51 N79-10694  
Coupling apparatus for ultrasonic medical  
diagnostic system  
[NASA-CASE-NPO-13935-1] c52 N79-14751  
Apparatus and method of inserting a  
microelectrode in body tissue or the like  
using vibration means  
[NASA-CASE-NPO-13910-1] c52 N79-27836  
Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c52 N81-20703  
Enhancement of in vitro Guayule propagation  
[NASA-CASE-NPO-15213-1] c51 N81-29728
- TITANATES**  
Vacuum preparation of zinc titanate pigment  
resistant to loss of reflective properties  
[NASA-CASE-MFS-13532] c18 N72-17532
- TITANIUM**  
Joining aluminum to stainless steel by bonding  
aluminum coatings onto titanium coated  
stainless steel and brazing aluminum to  
aluminum/titanium coated steel  
[NASA-CASE-MFS-07369] c15 N71-20443  
Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c37 N77-11397  
Method of mitigating titanium impurities effects  
in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c44 N80-24741
- TITANIUM ALLOYS**  
Method to prevent stress corrosion cracking in  
titanium alloys  
[NASA-CASE-NPO-10271] c17 N71-16393  
Chemical spot tests for identification of  
titanium and titanium alloys used in aerospace  
vehicles  
[NASA-CASE-LAR-10539-1] c17 N73-12547
- TITANIUM CARBIDES**  
Improved refractory coatings and method of  
producing the same  
[NASA-CASE-LEW-13169-1] c26 N80-14232
- TITANIUM NITRIDES**  
Improved refractory coatings --- sputtered  
coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c26 N81-16209
- TITANIUM OXIDES**  
Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c27 N77-30237
- TOLERANCES (MECHANICS)**  
Mechanism for restraining universal joints to  
prevent separation while allowing bending,  
angulation, and lateral offset in any position  
about axis  
[NASA-CASE-XNP-02278] c15 N71-28951
- TOLUENE**  
Supercritical multicomponent solvent coal  
extraction  
[NASA-CASE-NPO-15767-1] c28 N82-12241
- TOPOGRAPHY**  
System for plotting subsoil structure and method  
therefor  
[NASA-CASE-NPO-14191-1] c31 N80-32584
- TOOLS**  
Tool attachment for spreading or moving away  
loose elements from terminal posts during  
winding of filamentary elements  
[NASA-CASE-XMF-02107] c15 N71-10809
- Development of adjustable attitude guide block  
for setting pins perpendicular to irregular  
convex work surface  
[NASA-CASE-XLA-07911] c15 N71-15571  
Hand tool for forming dimples and nipples on end  
portion of tubes  
[NASA-CASE-XMS-06876] c15 N71-21536  
Tool for mounting and removing studs with  
adhesive coated head portion  
[NASA-CASE-MFS-20299] c15 N72-11392  
Insert facing tool --- manually operated cutting  
tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c37 N74-25968  
Stator rotor tools  
[NASA-CASE-MSC-16000-1] c37 N78-24544  
Open ended ratchet type tubing cutter  
[NASA-CASE-MSC-18538-1] c37 N80-22703  
Apparatus for accurately preloading auger  
attachment means for frangible protective  
material  
[NASA-CASE-MSC-18791-1] c37 N81-24446
- TOOTH DISEASES**  
Process for preparing calcium phosphate salts  
for tooth repair  
[NASA-CASE-ERC-10338] c04 N72-33072
- TOPOGRAPHY**  
Method for observing the features characterizing  
the surface of a land mass  
[NASA-CASE-PRC-11013-1] c43 N81-17499
- TORCHES**  
Computer controlled apparatus for maintaining  
welding torch angle and velocity during seam  
tracking  
[NASA-CASE-XMF-03287] c15 N71-15607  
Development of electric weeding torch with  
casing on one end to form inert gas shield  
[NASA-CASE-XMF-02330] c15 N71-23798  
Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c37 N79-10421
- TOROIDAL SHELLS**  
Toroidal cell and battery --- storage battery  
for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c44 N81-24521
- TOROIDS**  
Flux gate magnetometer with toroidal gating coil  
and solenoidal output coil for signal  
modulation or amplification  
[NASA-CASE-XGS-01881] c09 N70-40123
- TORQUE**  
Gearing system for eliminating backlash and  
filtering input torque fluctuations from high  
inertia load  
[NASA-CASE-XGS-04227] c15 N71-21744  
Coupling arrangement for isolating torque loads  
from axial, radial, and bending loads  
[NASA-CASE-XLA-04897] c15 N72-22482  
High-torque open-end wrench  
[NASA-CASE-NFO-13541-1] c37 N79-14383  
Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c71 N79-20827  
Magnetic field control --- electromechanical  
torquing devices  
[NASA-CASE-MFS-23828-1] c33 N80-17359  
Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c54 N80-30043
- TORQUE MOTORS**  
Low speed phaselock speed control system --- for  
brushless dc motor  
[NASA-CASE-GSC-11127-1] c09 N75-24758
- TORQUEMETERS**  
Remote-reading torquemeter for use where high  
horsepowers are transmitted at high rotative  
speeds  
[NASA-CASE-XLF-00503] c14 N70-34818  
Torquemeter for determining magnitude of torque  
generated by interaction of magnetic dipole  
between test specimen and ambient magnetic field  
[NASA-CASE-XGS-01013] c14 N71-23725
- TORSO**  
Restraint torso for increased nobility and  
reduced physiological effects while wearing  
pressurized suits  
[NASA-CASE-MSC-12397-1] c05 N72-25119  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c54 N78-31736
- TOUCH**  
Mechanically operated hand which can depress  
trigger using touch control device  
[NASA-CASE-MFS-20413] c15 N72-21463

- Measuring method for cutaneous perception using instrument with elongated tubular housing  
[NASA-CASE-MSC-13609-1] c05 N72-25122
- Prosthetic limb with tactile sensing device  
[NASA-CASE-MFS-16570-1] c05 N73-32013
- TOWERS**
- Aerial capsule emergency separation device using jettisonable towers  
[NASA-CASE-XLA-00115] c03 N70-33343
- TOXICITY AND SAFETY HAZARD**
- Apparatus for remote handling of materials --- mixing or analyzing dangerous chemicals  
[NASA-CASE-LAR-10634-1] c37 N74-18123
- TOXICOLOGY**
- System for continuous monitoring of exhalations, weighing, and cage cleaning for animal exposed to controlled atmosphere for toxic study  
[NASA-CASE-XAC-05333] c11 N71-22875
- TRACE CONTAMINANTS**
- Describing crystal oscillator instrument for detecting condensable gas contaminants in vacuum apparatus  
[NASA-CASE-NPO-10144] c14 N71-17701
- Heated tungsten filter for removing oxygen impurities from cesium  
[NASA-CASE-XNP-04262-2] c17 N71-26773
- Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c33 N79-15245
- TRACE ELEMENTS**
- Ion microprobe mass spectrometer with cooled electrode target for analyzing traces of fluids  
[NASA-CASE-ERC-10014] c14 N71-28863
- Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c25 N76-18245
- Nulling device for detection of trace gases by NDIR absorption  
[NASA-CASE-ARC-10760-1] c25 N76-22323
- Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c25 N78-15210
- TRACKING (POSITION)**
- Sensor consisting of photocells mounted on pyramidal base for improved pointing accuracy of planetary trackers  
[NASA-CASE-XNP-04180] c07 N69-39736
- Telespectrograph for analyzing upper atmosphere by tracking bodies reentering atmosphere at high velocities  
[NASA-CASE-XLA-03273] c14 N71-18699
- Laser beam projector for continuous, precise alignment between target, laser generator, and astronomical telescope during tracking  
[NASA-CASE-NPO-11087] c23 N71-29125
- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c35 N77-20401
- System and method for tracking a signal source --- employing feedback control  
[NASA-CASE-HGN-10880-1] c17 N78-17140
- Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c44 N79-14526
- TRACKING FILTERS**
- System for phase locking onto carrier frequency signal located within receiver bandpass  
[NASA-CASE-XGS-04994] c09 N69-21543
- Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c33 N79-11313
- PN lock indicator for dithered PN code tracking loop  
[NASA-CASE-NPO-14435-1] c33 N81-33405
- TRACKING RADAR**
- Electronic and mechanical scanning control system for monopulse tracking antenna  
[NASA-CASE-XGS-05582] c07 N69-27460
- Phase locked loop with sideband rejecting properties in continuous wave tracking radar  
[NASA-CASE-XNP-02723] c07 N70-41680
- Interferometric tuning acquisition and tracking radar antenna system  
[NASA-CASE-XMS-09610] c07 N71-24625
- Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c16 N72-13437
- Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c32 N82-10286
- TRACKING STATIONS**
- Optical monitor panel consisting of translucent screen with test or meter information projected onto it from rear for application in control rooms of missile launching and tracking stations  
[NASA-CASE-XKS-03509] c14 N71-23175
- Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c32 N75-15854
- TRAFFIC CONTROL**
- Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c66 N76-19888
- TRAILERS**
- Improved low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c85 N80-33312
- TRAILING-EDGE FLAPS**
- Double hinged flap for boundary layer control over trailing edges of wings  
[NASA-CASE-XLA-01290] c02 N70-42016
- Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c07 N79-14097
- Propulsive lateral control nozzle  
[NASA-CASE-LAR-12136-1] c08 N81-33210
- TRAINING SIMULATORS**
- Low and zero gravity simulator for astronaut training  
[NASA-CASE-MFS-10555] c11 N71-19494
- Apparatus for training astronaut crews to perform on simulated lunar surface under conditions of lunar gravity  
[NASA-CASE-XMS-04798] c11 N71-21474
- Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c09 N75-15662
- TRAJECTORY ANALYSIS**
- Table structure and rotating magnet system simulating gravitational forces on spacecraft and displaying trajectories between Earth, Venus, and Mercury  
[NASA-CASE-XNP-00708] c14 N70-35394
- Planetary atmospheric investigation using split trajectory dual flyby mode  
[NASA-CASE-XAC-08494] c30 N71-15990
- TRAJECTORY CONTROL**
- Spacecraft trajectory correction propulsion system  
[NASA-CASE-XNP-01104] c28 N70-39931
- Development of technique for control of free flight rocket vehicles  
[NASA-CASE-XLA-00937] c31 N71-17691
- Attitude stabilizer for nonguided missile or vehicle with respect to trajectory  
[NASA-CASE-ARC-10134] c30 N72-17873
- TRANSDUCERS**
- Fabrication of pressure-telemetry transducers  
[NASA-CASE-XNP-09752] c14 N69-21541
- Bootstrap unloading circuits for sampling transducer voltage sources without drawing current  
[NASA-CASE-XNP-09768] c09 N71-12516
- Transducer for measuring deflections from vibrating structures  
[NASA-CASE-XLA-03135] c32 N71-16428
- Describing device for surveying contour of surface using X-Y plotter and traveling transducer  
[NASA-CASE-XLA-08646] c14 N71-17586
- Rotary bead dropper and selector for testing micrometeorite transducers  
[NASA-CASE-XGS-03304] c09 N71-22988
- Development and characteristics of self-calibrating displacement transducer for measuring magnitude and frequency of displacement of bodies  
[NASA-CASE-XLA-00781] c09 N71-22999
- Transducer frame for use with extensometer to continuously monitor specimen sample  
[NASA-CASE-XLA-10322] c15 N72-17452
- Split range transducer  
[NASA-CASE-XLA-11189] c10 N72-20222
- Pulsed excitation voltage circuit for strain gage bridge transducers  
[NASA-CASE-FRC-10036] c09 N72-22200
- Passive type, magnifying scratch gage, force transducer  
[NASA-CASE-LAR-10496-1] c14 N72-22437
- Development of electronic detection system for remotely determining number and movement of enemy personnel  
[NASA-CASE-ARC-10097-2] c07 N73-25160

- Acoustical transducer calibrating system including differential pressure activating device  
[NASA-CASE-FRC-10060-1] c14 N73-27379
- Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c33 N74-17930
- LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers  
[NASA-CASE-MFS-21698-1] c33 N74-26732
- Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c52 N74-27566
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c33 N75-19520
- Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c33 N75-31329
- Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c35 N75-33369
- Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c33 N76-19338
- Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c38 N76-28563
- Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c52 N76-29895
- Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c44 N80-18552
- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c52 N80-27072
- Optical crystal temperature gauge with fiber optic connections --- cryogenic systems  
[NASA-CASE-MSC-16627-1] c74 N81-15818
- Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c52 N81-20703
- Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c44 N81-24525
- Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c39 N81-25400
- TRANSFORMERS**
- Impedance transformation device for signal mixing  
[NASA-CASE-XGS-01110] c07 N69-24334
- High impedance alternating current sensing transformer device between two bolometers for measuring insertion loss of test component  
[NASA-CASE-XNP-01193] c10 N71-16057
- Magnetic current regulator for saturable core transformer  
[NASA-CASE-ERC-10075] c09 N71-24800
- Unsaturating magnetic core transformer design with warning signal for electrical power processing equipment  
[NASA-CASE-ERC-10125] c09 N71-24893
- Development and characteristics of electronically resettable fuse with saturable core current sensing transformer having two outside legs and center leg  
[NASA-CASE-XGS-11177] c09 N71-27001
- Development and characteristics of voltage regulator for connection in series with alternating current source and load using three leg, two-window transformer  
[NASA-CASE-ERC-10113] c09 N71-27053
- Radial heat flux transformer for use in heating and cooling processes  
[NASA-CASE-NPO-10828] c33 N72-17948
- Current protection equipment for saturable core transformers  
[NASA-CASE-ERC-10075-2] c09 N72-22196
- Fail-safe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c09 N72-25262
- Banded transformer cores  
[NASA-CASE-NPO-11966-1] c33 N74-17928
- Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c33 N77-14335
- Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c33 N78-17295
- Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c33 N79-24257
- System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c33 N79-28415
- Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c33 N81-12330
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c33 N81-14220
- Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c33 N81-24338
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c33 N81-33404
- TRANSIENT HEATING**
- Thermocouple installation  
[NASA-CASE-NPO-13540-1] c35 N77-14409
- TRANSIENT LOADS**
- Deployable cantilever support for deploying solar cell arrays aboard spacecraft and reducing transient loading  
[NASA-CASE-NPO-10883] c31 N72-22874
- TRANSISTOR AMPLIFIERS**
- Overcurrent protecting circuit for push-pull transistor amplifiers  
[NASA-CASE-MSC-12033-1] c09 N71-13531
- Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c33 N82-11359
- TRANSISTOR CIRCUITS**
- Low power drain transistor feedback circuit  
[NASA-CASE-XGS-04999] c09 N69-24317
- Design of transistorized ring counter circuit with special steering and triggering circuits  
[NASA-CASE-XGS-03095] c09 N69-27463
- RC transistor circuit to indicate each pulse of pulse train and occurrence of nth pulse  
[NASA-CASE-XNP-00906] c09 N70-41655
- Linear sawtooth voltage wave generator with transistor timing circuit having capacitor and zener diode feedback loops  
[NASA-CASE-XMS-01315] c09 N70-41675
- Switching circuit with regeneratively connected transistors eliminating power consumption when not in use  
[NASA-CASE-XNP-02654] c10 N70-42032
- High voltage transistor circuit  
[NASA-CASE-XNP-06937] c09 N71-19516
- Complementary regenerative transistorized switch circuit employing positive and negative feedback  
[NASA-CASE-XGS-02751] c09 N71-23015
- Inverter drive circuit for semiconductor switch  
[NASA-CASE-LFW-10233] c10 N71-27126
- Transistorized circuit for producing multiple slope voltage sweep  
[NASA-CASE-XMS-03542] c09 N71-28926
- Circuitry for high input impedance video processor with high noise immunity  
[NASA-CASE-NPO-10199] c09 N72-17156
- Ultra-stable oscillator with complementary transistors  
[NASA-CASE-GSC-11513-1] c33 N74-20862
- Inrush current limiter  
[NASA-CASE-GSC-11789-1] c33 N77-14333
- Temperature compensated current source  
[NASA-CASE-MSC-11235] c33 N78-17294
- Inductorless narrow-band filter/amplifier  
[NASA-CASE-GSC-12410-1] c33 N79-24260
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c33 N81-33404
- TRANSISTORS**
- Power supply with overload protection for series stage transistor  
[NASA-CASE-XMS-00913] c10 N71-23543
- Solid state circuit for switching alternating current input signal as function of direct current gating transistor  
[NASA-CASE-XNP-06505] c10 N71-24799
- Broadband distribution amplifier with complementary pair transistor output stages  
[NASA-CASE-NPO-10003] c10 N71-26415
- Transistorized switching logic circuits with tunnel diodes  
[NASA-CASE-GSC-10878-1] c10 N72-22236
- Inverted geometry transistor for use with monolithic integrated circuit  
[NASA-CASE-ARC-10330-1] c09 N73-32112



- Four phase logic systems --- including integrated microcircuits  
[NASA-CASE-MSC-14240-1] c33 N75-14957
- Complementary DMOS-V MOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c33 N79-12321
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c33 N79-24257
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c33 N81-14220
- TRANSITION FLOW**  
Ablation article and surface for analyzing flow transition on ablative surface  
[NASA-CASE-LAR-10439-1] c33 N73-27796
- TRANSITION TEMPERATURE**  
Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c27 N78-32261
- TRANSLATIONAL MOTION**  
Centrifuge mounted motion simulator with elevator mechanism  
[NASA-CASE-XAC-00399] c11 N70-34815
- Development and characteristics of translating horizontal tail assembly for supersonic aircraft  
[NASA-CASE-XLA-08801-1] c02 N71-11043
- Semilinear bearing comprising two rows of roller bearings separated by spherical bearings and permitting rotational and translational movement  
[NASA-CASE-XLA-02809] c15 N71-22982
- Positioning mechanism for converting translatory motion into rotary motion  
[NASA-CASE-NPO-10679] c15 N72-21462
- TRANSLATORS**  
Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c32 N79-28383
- TRANSMISSION EFFICIENCY**  
Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c44 N74-19870
- Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c33 N77-14334
- TRANSMISSION LINES**  
Portable equipment for validating C band launch pad antennas and transmission lines used for spacecraft checkout  
[NASA-CASE-XKS-10543] c07 N71-26292
- Collapsible antenna boom and coaxial transmission line having inflatable inner tube  
[NASA-CASE-MFS-20068] c07 N71-27191
- Phase modulator with tuned variable length electrical lines including coupling and varactor diode circuits  
[NASA-CASE-MSC-13201-1] c07 N71-28429
- Shielded flat conductor cable of ribbonlike wires laminates in thin flexible insulation  
[NASA-CASE-MFS-13687-2] c09 N72-22198
- Development of phase control coupling for use with phased array antenna  
[NASA-CASE-ERC-10265] c10 N73-16206
- Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c33 N74-14956
- System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c33 N74-17927
- Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c32 N79-23310
- System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c33 N79-28415
- TRANSMISSIONS (MACHINE ELEMENTS)**  
Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c05 N81-19087
- TRANSMITTANCE**  
Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c33 N81-19394
- TRANSMITTER RECEIVERS**  
Low weight, integrated thermoelectric generator/antenna combination for spacecraft  
[NASA-CASE-XER-09521] c09 N72-12136
- Location identification system with ground based transmitter and aircraft borne receiver/decoder  
[NASA-CASE-ERC-10324] c07 N72-25173
- Automatic vehicle location system  
[NASA-CASE-NFO-11850-1] c32 N74-12912
- Digital communication system  
[NASA-CASE-MSC-13912-1] c32 N74-30524
- TRANSMITTERS**  
Temperature telemetric transmitter with frequency determining tank circuit for short range transmission  
[NASA-CASE-NPO-10649] c07 N71-24840
- Multicarrier communications system for transmitting modulated signals from single transmitter  
[NASA-CASE-NPO-11548] c07 N73-26118
- Miniature multichannel biotelemetry system  
[NASA-CASE-NFC-13065-1] c52 N74-26625
- Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c32 N75-21486
- Apparatus for endoscopic examination --- analysis of the propulsion system configuration and transmitter  
[NASA-CASE-NPO-14092-1] c52 N80-16725
- TRANSONIC SPEED**  
Construction of leading edges of surfaces for aerial vehicles performing from subsonic to above transonic speeds  
[NASA-CASE-XLA-01486] c01 N71-23497
- TRANSONIC WIND TUNNELS**  
Wind tunnel test section for simulating high Reynolds number over transonic speed range  
[NASA-CASE-MFS-20509] c11 N72-17183
- TRANSPARENCY**  
Transparent polycarbonate resin, shell helmet and latch design for high altitude and space flight  
[NASA-CASE-XMS-04935] c05 N71-11190
- Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c74 N77-28932
- Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NFO-14303-1] c44 N80-18550
- Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c44 N81-27598
- TRANSPIRATION**  
Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c20 N76-14191
- TRANSPONDERS**  
Equipment for testing of ground station ranging equipment and spacecraft transponders  
[NASA-CASE-XMS-05454-1] c07 N71-12391
- Spacecraft transponder and ground station radar system for mapping planetary surfaces  
[NASA-CASE-NPO-11001] c07 N72-21118
- Loop transponder for regenerating code of mu-type ranging system  
[NASA-CASE-NFC-11707] c07 N73-25161
- Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c32 N74-12912
- Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c32 N75-15854
- Automatic transponder --- measurement of the internal delay time of a transponder  
[NASA-CASE-GSC-12075-1] c32 N77-31350
- TRANSPORTATION**  
Supporting and protecting frame structure and plug for empty thrust chamber assembly, handling, and shipping  
[NASA-CASE-XMF-00580] c11 N70-35383
- TRANSVERSE ACCELERATION**  
Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c18 N81-29152
- TRAPS**  
Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c36 N75-19652
- TRAVELING WAVE AMPLIFIERS**  
Serrdyne traveling wave tube reentrant amplifier for synchronous communication satellites operating at microwave frequencies  
[NASA-CASE-XGS-01022] c07 N71-16088
- Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c33 N75-27251
- Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c33 N81-24348
- TRAVELING WAVE MASERS**  
Design of folded traveling wave maser structure  
[NASA-CASE-XNP-05219] c16 N71-15550



- Comb type traveling wave maser amplifier for improved high gain broadband output  
[NASA-CASE-NPO-10548] c16 N71-24831
- Independent gain and bandwidth control of a traveling wave maser  
[NASA-CASE-NPO-13801-1] c36 N78-18410
- TRAVELING WAVE TUBES**  
Segmented superconducting magnet producing staggered magnetic field and suitable for broadband traveling wave masers  
[NASA-CASE-XGS-10518] c16 N71-28554
- Traveling wave tube circuit  
[NASA-CASE-LEW-12013-1] c33 N79-10339
- Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c33 N80-19425
- TRAVELING WAVES**  
Traveling wave maser for operation in 7 to 20 GHz frequency range  
[NASA-CASE-NPO-11437] c16 N72-28521
- TREADMILLS**  
Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c51 N78-27733
- TRIGGER CIRCUITS**  
Design of transistorized ring counter circuit with special steering and triggering circuits  
[NASA-CASE-XGS-03095] c69 N69-27463
- Triggering system for electric arc driven impulse wind tunnel  
[NASA-CASE-XMF-00411] c11 N70-36913
- Voltage range selection apparatus for sensing and applying voltages to electronic instruments without loading signal source  
[NASA-CASE-XMS-06497] c14 N71-26244
- One shot multivibrator circuit for producing long duration output pulses  
[NASA-CASE-ARC-10137-1] c09 N71-28468
- Voltage amplitude-responsive trigger circuit with silicon controlled rectifier  
[NASA-CASE-GSC-10221-1] c09 N72-23171
- Rapidly pulsed, high intensity, incoherent light source  
[NASA-CASE-XLE-2529-3] c33 N74-20859
- TRIGONOMETRY**  
Electrical and electromechanical trigonometric computation assembly and space vehicle guidance system for aligning perpendicular axes of two sets of three-axes coordinate references  
[NASA-CASE-XMF-00684] c21 N71-21688
- TRIMERS**  
New trifunctional alcohol derived from trimer acid and novel method of preparation  
[NASA-CASE-NPO-10714] c06 N69-31244
- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c27 N78-15276
- Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c27 N79-28307
- TRIODES**  
Vacuum thermionic converter with short-circuited triodes and increased electron transmission and conversion efficiency  
[NASA-CASE-XLE-01015] c03 N69-35898
- TRITIUM**  
Method for determining state of charge of alkali batteries by using tritium as tracer  
[NASA-CASE-XNP-01464] c03 N71-10728
- TROPOPAUSE**  
CAF altitude avoidance system  
[NASA-CASE-NFO-15351-1] c47 N81-16677
- TRUCKS**  
Fifth wheel  
[NASA-CASE-FRC-10081-1] c37 N77-14477
- Improved low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c85 N80-33312
- TRUSSES**  
Low mass truss structure with elongated thin-walled tubular segments  
[NASA-CASE-LAR-10546-1] c11 N72-25287
- Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c31 N81-25258
- Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c31 N81-27323
- TUBE GRIDS**  
Method for fabricating solar cells having integrated collector grids  
[NASA-CASE-LEW-12819-2] c44 N79-18444
- TUBE HEAT EXCHANGERS**  
High resistance cross flow heat exchangers for electrothermal rocket engines  
[NASA-CASE-XLE-01783] c28 N70-34175
- Gas chromatographic method for determining water in nitrogen tetroxide rocket propellant  
[NASA-CASE-NFO-10234] c06 N72-17094
- Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c52 N77-14736
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NFO-14619-1] c44 N81-17518
- TUBES**  
Forming tubes from long thin flat metal strips  
[NASA-CASE-XGS-04175] c15 N71-18579
- Hermetic sealing device for ends of tubular bodies during materials testing operations  
[NASA-CASE-NPO-10431] c15 N71-29132
- TUMBLING MOTION**  
Tumbling motion system for object demagnetization  
[NASA-CASE-XGS-02437] c15 N69-21472
- Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c06 N81-22048
- TUMORS**  
Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c52 N77-14736
- TUNABLE LASERS**  
Tunable injection-locked pulsed CO2 laser  
[NASA-CASE-NPO-14984-1] c36 N81-15350
- TUNGSTEN**  
Bonding method for improving contact between lead telluride thermoelectric elements and tungsten electrodes  
[NASA-CASE-XGS-04554] c15 N69-39786
- Method for producing porous tungsten plates for ionizing cesium compounds for propulsion of ion engines  
[NASA-CASE-XLE-00455] c28 N70-38197
- Small plasma probe using tungsten wire collector in tubular shield  
[NASA-CASE-XLE-02578] c25 N71-20747
- Production method for manufacturing porous tungsten bodies from tungsten powder particles  
[NASA-CASE-XNP-04339] c17 N71-29137
- Vapor deposition method for forming metallized tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c09 N72-25259
- Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NFC-13121-1] c73 N77-18891
- TUNGSTEN ALLOYS**  
Evaporating crucible of tantalum-tungsten foil, nickel alumina bonding agent, and ceramic coating  
[NASA-CASE-XLA-03105] c15 N69-27483
- Cobalt-tungsten alloys with superior strength at elevated temperatures  
[NASA-CASE-LEW-10436-1] c17 N73-32415
- Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c26 N77-32279
- TUNING**  
Active tuned circuits for microelectronic construction  
[NASA-CASE-GSC-11340-1] c10 N72-33230
- Microwave generator using Gunn effect for magnetic tuning  
[NASA-CASE-NPO-12106] c09 N73-15235
- Tuned analog network --- bandpass filter networks  
[NASA-CASE-GSC-12650-1] c33 N82-10324
- Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c33 N82-11359
- TUNNEL DIODES**  
Low power drain transistor feedback circuit  
[NASA-CASE-XGS-04999] c09 N69-24317
- TUNNELING (EXCAVATION)**  
Intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c35 N81-19430
- TUNNELS**  
Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c37 N76-22540

**TURBINE BLADES**

Transpiration cooled turbine blade made from metallic or ceramic wires  
[NASA-CASE-XLE-00020] c15 N70-33226

Modification and improvement of turbine blades for maximum cooling efficiency  
[NASA-CASE-XLE-00092] c15 N70-33264

Preparation of nickel alloys for jet turbine blades operating at high temperatures  
[NASA-CASE-XLE-00151] c17 N70-33283

External device for liquid spray cooling of gas turbine blades  
[NASA-CASE-XLE-00037] c28 N70-33372

Apparatus for liquid spray cooling of turbine blades  
[NASA-CASE-XLE-00027] c33 N71-29152

Process for welding compressor and turbine blades to rotors and discs of jet engines  
[NASA-CASE-LEW-10533-1] c15 N73-28515

Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c24 N77-19170

Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c37 N80-24619

Improved method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-1] c37 N80-26660

Wingtip vortex turbine  
[NASA-CASE-LAR-12544-1] c07 N81-27096

**TURBINE ENGINES**

High speed, self-acting shaft seal --- for use in turbine engines  
[NASA-CASE-LEW-11274-1] c37 N75-21631

Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c07 N77-28118

Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c37 N79-18318

Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c05 N79-24576

Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c37 N80-26658

**TURBINE PUMPS**

Pulsed energy power system for application of combustible gases to turbine controlling ac voltage generator  
[NASA-CASE-MSC-13112] c03 N71-11057

Portable cryogenic cooling system design including turbine pump, cooling chamber, and atomizer  
[NASA-CASE-NPO-10467] c23 N71-26654

Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c20 N74-13502

Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c20 N80-14188

**TURBINE WHEELS**

Locking device for retaining turbine rotor blades on turbine wheel  
[NASA-CASE-XNP-00816] c28 N71-28928

Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c37 N74-11300

Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c07 N77-27116

**TURBINES**

Liquid-vapor interface seal design for turbine rotating shafts including helical and molecular pumps and liquid cooling of mercury vapor  
[NASA-CASE-XNP-02862-1] c15 N71-26294

**TURBOCOMPRESSORS**

Multistage multiple reentry axial flow reaction turbine with reverse flow reentry ducting  
[NASA-CASE-XLE-00170] c15 N70-36412

Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c07 N79-10057

Diesel engine catalytic combustor system --- turbocharging  
[NASA-CASE-LEW-12995-1] c37 N80-26659

**TURBOFAN ENGINES**

Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c07 N74-28226

Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c07 N74-32418

Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c07 N76-18131

Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c07 N78-17055

Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c07 N80-18039

Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c07 N81-19116

**TURBOFANS**

Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c07 N77-14025

Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c07 N77-17059

**TURBOJET ENGINE CONTROL**

Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c07 N81-19116

**TURBOJET ENGINES**

Telescoping-spike supersonic nozzle for turbojet or ramjet engines  
[NASA-CASE-XLE-00005] c28 N70-39899

Design and development of gas turbine combustion unit with nozzle guide vanes for introducing diluent air into combustion gases  
[NASA-CASE-XLE-103477-1] c28 N71-20330

Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c07 N80-26298

**TURBOMACHINE BLADES**

Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c07 N77-32148

Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c37 N80-26658

**TURBOMACHINERY**

Blade vibration damping pins for turbomachinery  
[NASA-CASE-XLE-00155] c28 N71-29154

Centrifugal-reciprocating compressor  
[NASA-CASE-NFO-14597-1] c37 N79-23431

**TURBOSHAPTS**

Remote-reading torquemeter for use where high horsepowers are transmitted at high rotative speeds  
[NASA-CASE-XLE-00503] c14 N70-34818

High speed, self-acting shaft seal --- for use in turbine engines  
[NASA-CASE-LEW-11274-1] c37 N75-21631

Improved method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NFO-15037-1] c37 N80-26660

**TURBULENT FLOW**

Exhaust flow deflector --- for ducted gas flow  
[NASA-CASE-LAR-11570-1] c34 N76-18364

System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c34 N76-27517

System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c34 N77-27345

Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c02 N80-20224

**TURNSTILE ANTENNAS**

Flexible turnstile antenna system for reducing nutation in spin-oriented satellites  
[NASA-CASE-XMP-00442] c31 N71-10747

Broadband modified turnstile antenna for use in space tracking and communications  
[NASA-CASE-MSC-12209] c09 N71-24842

Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c32 N74-20864

Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c33 N76-14372

**TURRET**

Indexing mechanism for cathode array substitution in electron beam tube  
[NASA-CASE-NPO-10625] c09 N71-26182

**TWISTING**

Means for controlling aerodynamically induced twist --- equipment to control twisting of slender wings due to aerodynamic loads  
[NASA-CASE-LAR-12175-1] c05 N80-16055

**TWO BODY PROBLEM**

Instrument for measuring potentials on two dimensional electric field plot  
[NASA-CASE-XLA-08493] c10 N71-19421

**TWO DIMENSIONAL BODIES**

Two-dimensional radiant energy array computers

and computing devices  
[NASA-CASE-GSC-11839-1] c60 N77-14751

**TWO PHASE FLOW**

Solenoid two-step valve for bipropellant flow rate control to rocket engine  
[NASA-CASE-XMS-C4890-1] c15 N70-22192

Two phase fluid pressurization system for propellant tank  
[NASA-CASE-MSC-12390] c27 N71-29155

Two-phase flow system with discrete, impinging two-phase jets  
[NASA-CASE-NPO-11556] c12 N72-25292

Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NFO-14130-1] c34 N79-20335

Improved method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-1] c37 N80-26660

**TWO STAGE TURBINES**

Improved method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-1] c37 N80-26660

**TYPEWRITERS**

Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c37 N77-19457

## U

**U BENDS**

Elbow forming in jacketed pipes while maintaining separation between core shape and jacket pipes  
[NASA-CASE-XNP-10475] c15 N71-24679

U shaped heated tube for distillation and purification of liquid metals  
[NASA-CASE-XNP-08124-2] c06 N73-13129

**ULCERS**

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N81-14613

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c52 N81-29764

**ULLAGE**

Radiation source and detection system for measuring amount of liquid inside tanks independently of liquid configuration  
[NASA-CASE-MSC-12280] c27 N71-16348

**ULTRAHIGH FREQUENCIES**

Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c33 N76-14372

Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c32 N80-23524

**ULTRAHIGH VACUUM**

Solid lubricant applied to porous roller bearings prior to use in ultrahigh vacuum  
[NASA-CASE-XLE-09527] c15 N71-17688

Calibration of vacuum gauges for measuring total and partial pressures in ultrahigh vacuum region  
[NASA-CASE-XGS-07752] c14 N73-30390

Ultrahigh vacuum gauge with two collector electrodes  
[NASA-CASE-LAR-02743] c14 N73-32324

In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c35 N74-15092

**ULTRASONIC AGITATION**

Development of ultrasonic radiation equipment for removing material from host surface and vacuum apparatus for recovery of material  
[NASA-CASE-NFO-11213] c15 N73-20514

**ULTRASONIC CLEANING**

Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c52 N81-12724

**ULTRASONIC FLAW DETECTION**

Length mode piezoelectric ultrasonic transducer for inspection of solid objects  
[NASA-CASE-MSC-19672-1] c38 N79-14398

**ULTRASONIC RADIATION**

Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c52 N74-20726

Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c52 N76-33835

Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c52 N79-26771

**ULTRASONIC TESTS**

Ultrasonic scanner for radial and flat panels

[NASA-CASE-MFS-20335-1] c35 N74-10415

Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c38 N74-15130

Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c38 N74-15395

CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c39 N78-15512

**ULTRASONIC WAVE TRANSDUCERS**

Development of ultrasonic radiation equipment for removing material from host surface and vacuum apparatus for recovery of material  
[NASA-CASE-NPO-11213] c15 N73-20514

Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c35 N75-12271

Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c54 N75-27760

Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c35 N76-15432

Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c52 N79-14751

Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c35 N80-18363

CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c35 N80-20559

**ULTRASONIC WELDING**

Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c37 N75-25185

**ULTRASONICS**

Ultrasonic wrench for applying vibratory energy to mechanical fasteners  
[NASA-CASE-MFS-20586] c15 N71-17686

Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c35 N79-10390

**ULTRAVIOLET FILTERS**

Ultraviolet filter of thorium fluoride and cryolite on quartz base  
[NASA-CASE-XNP-02340] c23 N69-24332

Development of ultraviolet resonance lamp with improved transmission of radiation  
[NASA-CASE-ARC-10030] c09 N71-12521

**ULTRAVIOLET LASERS**

Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c72 N79-13826

**ULTRAVIOLET RADIATION**

Ultraviolet radiation resistant alkali-metal silicate coatings for temperature control of spacecraft  
[NASA-CASE-XGS-04119] c18 N69-39979

Development of ultraviolet resonance lamp with improved transmission of radiation  
[NASA-CASE-ARC-10030] c09 N71-12521

Gas leak detection in evacuated systems using ultraviolet radiation probe  
[NASA-CASE-ERC-10034] c15 N71-24896

Phototropic composition of matter with sensitivity to ultraviolet light and usable for producing positive photographic images  
[NASA-CASE-XGS-03736] c14 N72-22443

Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c70 N74-13436

Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156

Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c34 N74-23066

Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c19 N74-29410

Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NFO-13346-1] c36 N76-29575

Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315

- Vitra-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c27 N80-26446
- ULTRAVIOLET REFLECTION**  
Composition and production method of alkali metal silicate paint with ultraviolet reflection properties  
[NASA-CASE-XGS-04799] c18 N71-24183  
Ultraviolet light reflective coating  
[NASA-CASE-GSC-11786-1] c24 N76-24363  
Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c74 N78-15879
- ULTRAVIOLET SPECTRA**  
Ultraviolet chromatographic detector for quantitative and qualitative analysis of compounds  
[NASA-CASE-HCN-10756-1] c14 N72-25428
- ULTRAVIOLET SPECTROMETERS**  
Concave grating spectrometer for use in near and vacuum ultraviolet regions  
[NASA-CASE-XGS-01036] c14 N70-40003  
Telespectrograph for analyzing upper atmosphere by tracking bodies reentering atmosphere at high velocities  
[NASA-CASE-XLA-03273] c14 N71-18699
- UMBILICAL CONNECTORS**  
Umbilical separator for rockets  
[NASA-CASE-XNP-00425] c11 N70-38202  
Remotely actuated quick disconnect mechanism for umbilical cables  
[NASA-CASE-XLA-00711] c03 N71-12258  
Remotely actuated quick disconnect for tubular umbilical conduits used to transfer fluids from ground to rocket vehicle  
[NASA-CASE-XLA-01396] c03 N71-12259  
Internal and external serpentine devices for performing physical operations around orbital space stations  
[NASA-CASE-XNP-05344] c31 N71-16345  
Breakaway multiwire electrical cable connector with particular application for umbilical type cables  
[NASA-CASE-NPO-11140] c15 N72-17455  
Gas operated quick disconnect coupling for umbilical connectors  
[NASA-CASE-NPO-11202] c15 N72-25450  
Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c37 N76-22540
- UMBILICAL TOWERS**  
Emergency escape cabin system for launch towers  
[NASA-CASE-XKS-02342] c05 N71-11199
- UNDERWATER ENGINEERING**  
Ejectable underwater sound source recovery assembly  
[NASA-CASE-LAR-10595-1] c35 N74-16135  
Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c46 N79-23555
- UNDERWATER TESTS**  
Pressure regulator for space suit worn underwater to simulate space environment for testing and experimentation  
[NASA-CASE-MFS-20332] c05 N72-20097  
Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c05 N73-25125
- UNIFORM FLOW**  
Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c09 N75-12969
- UNIONS (CONNECTORS)**  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c31 N81-12283  
Universal connectors for joining stringers  
[NASA-CASE-LAR-12744-1] c37 N81-31551
- UNLOADING**  
Bootstrap unloading circuits for sampling transducer voltage sources without drawing current  
[NASA-CASE-XNP-09768] c09 N71-12516
- UNMANNED SPACECRAFT**  
Device which separates and screens particles of soil samples for vidicon viewing in vacuum and reduced gravity environments  
[NASA-CASE-XNP-09770-3] c11 N71-27036
- UP-CONVERTERS**  
Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c33 N81-15192
- UPPER ATMOSPHERE**  
Telespectrograph for analyzing upper atmosphere by tracking bodies reentering atmosphere at high velocities  
[NASA-CASE-XLA-03273] c14 N71-18699  
Development and operation of apparatus for sampling particulates in gases in upper atmosphere  
[NASA-CASE-HCN-10037-1] c14 N73-27376  
Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c15 N74-27360  
Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c46 N82-12685
- URANIUM 235**  
Isotope separation using metallic vapor lasers  
[NASA-CASE-NFC-13550-1] c36 N77-26477
- UREAS**  
Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NFC-13620-1] c27 N77-30236  
Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c52 N80-14687  
Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c27 N80-23452
- URETHANES**  
Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c27 N81-15104
- URINALYSIS**  
Automated fluid chemical analyzer for microchemical analysis of small quantities of liquids by use of selected reagents and analyzer units  
[NASA-CASE-XNP-09451] c06 N71-26754  
Enzymatic luminescent bioassay method for determining bacterial levels in urine  
[NASA-CASE-GSC-11092-2] c04 N73-27052  
Automatic device for assaying urine on bacterial adenosine triphosphate content  
[NASA-CASE-GSC-11169-2] c05 N73-32011  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750
- URINATION**  
Open type urine receptacle with tubular housing  
[NASA-CASE-MSC-12324-1] c05 N72-22093  
Urine collection device  
[NASA-CASE-MSC-16433-1] c52 N81-24711  
Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c52 N81-28740
- URINE**  
Urine collection device  
[NASA-CASE-MSC-16433-1] c52 N78-27750
- UROLOGY**  
Urine collection device  
[NASA-CASE-MSC-16433-1] c52 N81-24711

## V

- V GROOVES**  
Vee-notching device --- with adjustable carriage  
[NASA-CASE-MFS-20730-1] c39 N74-13131  
Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c33 N79-12321  
Rotary target V-block --- aligning wind tunnel apparatus for optical measurement  
[NASA-CASE-LAR-12007-2] c74 N79-25876
- VACANCIES (CRYSTAL DEFECTS)**  
Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c26 N77-28265
- VACUUM**  
Hole mobility of deposited semiconductor films in vacuum utilizing thermal gradient  
[NASA-CASE-XKS-04614] c15 N69-21460  
Operating properties of superconducting magnet in vacuum environment  
[NASA-CASE-XNP-06503] c23 N71-29049  
Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c35 N79-14346  
Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c35 N79-33450

## VACUUM APPARATUS

Null-type vacuum microbalance for measuring minute mechanical displacements  
[NASA-CASE-XAC-00472] c15 N70-40180

Sealing evacuation port and evacuating vacuum container such as space jackets  
[NASA-CASE-XMF-03290] c15 N71-23256

Apparatus for determining volatile condensable material present in polymeric products  
[NASA-CASE-XNP-09699] c06 N71-24607

Oil trap for preventing diffusion pump backstreaming into evacuated system  
[NASA-CASE-GSC-10518-1] c15 N72-22489

Inductance device with vacuum insulation and materials of low gas entrapping capability  
[NASA-CASE-LEW-10330-1] c09 N72-27226

Development of apparatus for producing metal powder particles of controlled size  
[NASA-CASE-XLE-06461-2] c17 N72-28535

Portable vacuum probe surface sampler for sampling large surface areas with relatively light loading densities of microorganisms  
[NASA-CASE-LAR-10623-1] c14 N73-30395

Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c35 N75-19612

Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c37 N76-21554

Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c31 N81-19343

Method and apparatus for supercooling and solidifying substances --- containless melts and space processing  
[NASA-CASE-MFS-25242-1] c35 N81-24413

Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c37 N81-33482

**VACUUM CHAMBERS**

High-vacuum condenser tank for testing ion rocket engines  
[NASA-CASE-XLE-00168] c11 N70-33278

Portable electron beam welding chamber  
[NASA-CASE-LEW-11531] c15 N71-14932

Space environmental work simulator with portions of space suit mounted to vacuum chamber wall  
[NASA-CASE-XMF-07488] c11 N71-16773

Ionization control system design for monitoring separately located ion gage pressures on vacuum chambers  
[NASA-CASE-XLE-00787] c14 N71-21090

Coherent light beam device and method for measuring gas density in vacuum chambers  
[NASA-CASE-XER-11203] c14 N71-28994

Transferring liquid nitrogen through vacuum chamber to cryopanel  
[NASA-CASE-LAR-10031] c15 N72-22484

Vacuum chamber with scale model of rocket engine base area of space vehicle  
[NASA-CASE-MFS-20620] c11 N72-27262

Packless valve for use with evacuation chamber with adapter for attachment to vacuum line and vacuum pump  
[NASA-CASE-LAR-10061-1] c15 N72-31483

Apparatus for analyzing gas samples in containers including vacuum chamber, mass spectrometer, and gas chromatography  
[NASA-CASE-GSC-10903-1] c14 N73-12444

Design and development of test stand system for supporting test items in vacuum chamber  
[NASA-CASE-MFS-21362] c11 N73-20267

Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c28 N80-20402

Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c35 N81-19426

**VACUUM DEPOSITION**

Deposition method for epitaxial beta SiC films having high degree of crystallographic perfection  
[NASA-CASE-ERC-10120] c26 N69-33482

Describing apparatus used in vacuum deposition of thin film inductive windings for spacecraft microcircuitry  
[NASA-CASE-XMF-01667] c15 N71-17647

Spatter proof evaporant source design for use in vacuum deposition of solid thin films on substrates

[NASA-CASE-XMF-06065] c15 N71-20395

Device for high vacuum film deposition with electromagnetic ion steering  
[NASA-CASE-NFO-10331] c09 N71-26701

Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c27 N79-14214

**VACUUM EFFECTS**

High power RF coaxial switch  
[NASA-CASE-NFO-14229-1] c33 N80-18285

**VACUUM FURNACES**

Apparatus for inserting and removing specimens from high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c31 N74-27900

**VACUUM GAGES**

Simulating operation of thermopile vacuum gage tube at high and low pressures  
[NASA-CASE-XLA-02758] c14 N71-18481

Calibration of vacuum gauges for measuring total and partial pressures in ultrahigh vacuum region  
[NASA-CASE-XGS-07752] c14 N73-30390

Ionization gage for measuring ultrahigh vacuum levels  
[NASA-CASE-XLA-05087] c14 N73-30391

In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c35 N74-15092

**VACUUM MELTING**

Electric furnace for vacuum and zero gravity melting of high melting point materials during earth orbit  
[NASA-CASE-MFS-20710] c11 N72-23215

**VACUUM PUMPS**

Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c37 N81-17433

**VACUUM SYSTEMS**

Shrink-fit vacuum system gas valve  
[NASA-CASE-XGS-00587] c15 N70-35087

Leakproof soft metal seal for use in very high vacuum systems operating at cryogenic temperatures  
[NASA-CASE-XGS-02441] c15 N70-41629

Describing hot filament type Bayard-Alpert ionization gage with ion collector buried or removed from grid structure  
[NASA-CASE-XLA-07424] c14 N71-18482

Describing sorption vacuum trap having housing with group of reentrant wall portions projecting into internal gas-permeous container filled with gas and vapor sorbent material  
[NASA-CASE-XER-09519] c14 N71-18483

Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c35 N75-19612

**VACUUM TUBES**

Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c31 N76-31365

Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c26 N80-14229

**VALVE**

High impact pressure regulator having minimum number of lightweight movable elements  
[NASA-CASE-NPO-10175] c14 N71-18625

**VALVES**

Actuator using compressed gas as driving force to control valve handling large liquid flows  
[NASA-CASE-XHQ-01208] c15 N70-35409

Two component valve assembly for cryogenic liquid transfer regulation  
[NASA-CASE-XLE-00397] c15 N70-36492

High pressure four-way valve with O ring adapted to pass across inlet port  
[NASA-CASE-XNP-00214] c15 N70-36908

Reinforcing beam system for highly flexible diaphragms in valves or pressure switches  
[NASA-CASE-XNP-01962] c32 N70-41370

Multiple vortex amplifier system as fluid valve  
[NASA-CASE-XMF-04709] c15 N71-15609

Throttle valve for regulating fluid flow volume  
[NASA-CASE-XNP-09698] c15 N71-18580

Development and characteristics of high pressure control valve  
[NASA-CASE-MSC-11010] c15 N71-19485

Valve seat with resilient support ring for venting valves subjected to high pressure sealing loads  
[NASA-CASE-XKS-02582] c15 N71-21234

- Positive locking check valve for stopping reversed flow  
[NASA-CASE-XMS-09310] c15 N71-22706
- Valve assembly for controlling simultaneously more than one fluid flow, and having stable qualities under loads  
[NASA-CASE-XMS-05890] c09 N71-23191
- Segmented sealing surface in valve, seat  
[NASA-CASE-NPO-10606] c15 N72-25451
- Packless valve for use with evacuation chamber with adapter for attachment to vacuum line and vacuum pump  
[NASA-CASE-LAR-10061-1] c15 N72-31483
- Flow control valve --- for high temperature fluids  
[NASA-CASE-NPO-11951-1] c37 N74-21065
- Airlock  
[NASA-CASE-MPS-20922-1] c18 N74-22136
- Reciprocating engines  
[NASA-CASE-MSC-16239-1] c37 N81-32510
- VANES**
- Design and characteristics of device for sensing solar radiation and providing spacecraft attitude control to maintain direction with respect to incident radiation  
[NASA-CASE-XNP-05535] c14 N71-23040
- Rotary vane attenuator with two stators and intermediary rotor, using resistive and orthogonally disposed cards  
[NASA-CASE-NPO-11418-1] c14 N73-13420
- VAPOR DEPOSITION**
- Deposition method for epitaxial beta SiC films having high degree of crystallographic perfection  
[NASA-CASE-ERC-10120] c26 N69-33482
- Device for producing high purity silicon carbide on carbon base by hydrogen reduction of silicon tetrachloride  
[NASA-CASE-XLA-02057] c26 N70-40015
- Water content in vapor deposition atmosphere for forming n-type and p-type junctions of zinc doped gallium arsenide  
[NASA-CASE-XNP-01961] c26 N71-29156
- Vapor deposition method for forming metallized tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c09 N72-25259
- Means of vapor deposition using electric current and evaporator filament  
[NASA-CASE-LAR-10541-1] c15 N72-32487
- Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c27 N74-13270
- System for depositing thin films  
[NASA-CASE-MPS-20775-1] c31 N75-12161
- Vapor deposition apparatus --- semiconductors and gallium arsenides  
[NASA-CASE-HQN-10462] c25 N75-29192
- Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c25 N79-28253
- VAPOR PHASES**
- Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment  
[NASA-CASE-XLE-01182] c27 N71-15635
- Gallium arsenide solar cell preparation by surface deposition of cuprous iodide on thin n-type polycrystalline layers and heating in iodine vapor  
[NASA-CASE-XNP-01960] c09 N71-23027
- Mixed liquid and vapor phase analyzer, design with thermocouples for relative heat transfer measurement  
[NASA-CASE-NPO-10691] c14 N71-26199
- Electronic recording system for spatial mass distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NPO-10185] c10 N71-26339
- VAPOR PRESSURE**
- Fuel tank pressure-relief device for venting cryogenic liquid vapors through tubes with porous plug  
[NASA-CASE-XLE-00288] c15 N70-34247
- Vapor-liquid separator design with vapor driven pump for separated liquid pumping for application in propellant transfer  
[NASA-CASE-XMF-04042] c15 N71-23023
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c36 N80-20574
- VAPOR TRAPS**
- Describing sorption vacuum trap having housing with group of reentrant wall portions projecting into internal gas-pervious container filled with gas and vapor sorbent material  
[NASA-CASE-XEB-09519] c14 N71-18483
- VAPORIZERS**
- Vapor generating boiler system for turbine motor  
[NASA-CASE-XLE-00785] c33 N71-16104
- Potential heat exchange fluids for use in sulfuric acid vaporizers  
[NASA-CASE-NPO-15015-1] c25 N80-23394
- VAPORIZING**
- Apparatus and process for volumetrically dispensing reagent quantities of volatile chemicals for small batch reactions  
[NASA-CASE-NPO-10070] c15 N71-27372
- Development of method for controlling vapor content of gas  
[NASA-CASE-NPO-10633] c03 N72-28025
- VARACTOR DIODE CIRCUITS**
- Phase modulator with tuned variable length electrical lines including coupling and varactor diode circuits  
[NASA-CASE-MSC-13201-1] c07 N71-28429
- VARACTOR DIODES**
- Varactor microwave frequency mixing circuit  
[NASA-CASE-XGS-02171] c09 N69-24324
- Multiple varactor for generating high frequencies with high power and high conversion efficiency  
[NASA-CASE-XMF-04958-1] c10 N71-26414
- Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c33 N74-32660
- VARIABLE CYCLE ENGINES**
- Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c07 N77-28118
- Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c37 N78-17384
- Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067
- VARIABLE GEOMETRY STRUCTURES**
- Aerospace configuration with low and high aspect ratio variability for high and low speed flight  
[NASA-CASE-XLA-00142] c02 N70-33286
- Variable geometry wind tunnel for testing aircraft models at subsonic speeds  
[NASA-CASE-XLA-07430] c11 N72-22246
- Aircraft engine nozzle  
[NASA-CASE-ABC-10977-1] c07 N80-32392
- VARIABLE PITCH PROPELLERS**
- Dual output variable pitch turboprop actuation system  
[NASA-CASE-LEW-12419-1] c07 N77-14025
- Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c37 N78-10468
- VARIABLE SWEEP WINGS**
- Variable sweep wing configuration for supersonic aircraft  
[NASA-CASE-XLA-00230] c02 N70-33255
- Variable aspect ratio and variable sweep delta wing planforms for supersonic aircraft  
[NASA-CASE-XLA-00221] c02 N70-33266
- Supersonic aircraft configuration providing for variable aspect ratio and variable sweep wings  
[NASA-CASE-XLA-00166] c02 N70-34178
- Supersonic aircraft variable sweep wing planform for varying aspect ratio  
[NASA-CASE-XLA-00350] c02 N70-38011
- Development and characteristics of variable sweep wing control system for supersonic aircraft  
[NASA-CASE-XLA-03659] c02 N71-11041
- Design of dual fuselage aircraft with pivoting wing and horizontal stabilizer to permit yawing of wing in flight for high speed operation  
[NASA-CASE-ABC-10470-1] c02 N73-26005
- VARIABLE THRUST**
- Variable thrust ion engine using thermal decomposition of solid cesium compound to produce propulsive vapor  
[NASA-CASE-XMF-00923] c28 N70-36802
- Continuous variation of propellant flow and thrust by application of liquid foam flow

- theory to injection orifice  
[NASA-CASE-XLE-00177] c28 N70-40367
- Variable thrust nozzle for quiet turbofan engine  
and method of operating same  
[NASA-CASE-LEM-12317-1] c07 N78-17055
- VARIATIONS**
- Gearing system for eliminating backlash and  
filtering input torque fluctuations from high  
inertia load  
[NASA-CASE-XGS-04227] c15 N71-21744
- VECTOR ANALYSIS**
- Development of two force component measuring  
device  
[NASA-CASE-XAC-04886-1] c14 N71-20439
- VECTOCARDIOGRAPHY**
- Electromedical garment, applying  
vectorcardiologic type electrodes to human  
torsos for data recording during physical  
activity  
[NASA-CASE-XFR-10856] c05 N71-11189
- VEGETATION GROWTH**
- Rotary plant growth accelerating apparatus ---  
weightlessness  
[NASA-CASE-ARC-10722-1] c51 N75-25503
- Remote sensing of vegetation and soil using  
microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c43 N78-10529
- Enhancement of in vitro Guayule propagation  
[NASA-CASE-NPO-15213-1] c51 N81-29728
- VEHICLE WHEELS**
- Resilient vehicle wheel for lunar surface travel  
[NASA-CASE-MFS-20400] c31 N71-18611
- Resilient wheel design with woven wire tire and  
abrasive treads for lunar surface vehicles  
[NASA-CASE-MFS-13929] c15 N71-27091
- Omnidirectional wheel  
[NASA-CASE-MFS-21309-1] c37 N74-18125
- Two speed drive system --- mechanical device for  
changing speed on rotating vehicle wheel  
[NASA-CASE-MFS-20645-1] c37 N74-23070
- Fifth wheel  
[NASA-CASE-FRC-10081-1] c37 N77-14477
- Improved tire/wheel concept --- pneumatic  
aircraft tire  
[NASA-CASE-LAR-11695-2] c37 N80-18402
- Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c37 N81-24443
- VEHICLES**
- Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c37 N78-27424
- VELOCITY**
- Velocity limiting safety system for motor driven  
research vehicle  
[NASA-CASE-XLA-07473] c15 N71-24895
- VELOCITY MEASUREMENT**
- Particle detector for measuring micrometeoroid  
velocity in space  
[NASA-CASE-XLA-00495] c14 N70-41332
- Superconductive accelerometer employing variable  
force principle to determine acceleration of  
bodies  
[NASA-CASE-XMP-01099] c14 N71-15969
- Device for determining acceleration of gravity  
by interferometric measurement of travel of  
falling body  
[NASA-CASE-XMP-05644] c14 N71-17587
- Describing laser Doppler velocimeter for  
measuring mean velocity and turbulence of  
fluid flow  
[NASA-CASE-MFS-20386] c21 N71-19212
- Momentum-velocity analyzer for measuring minute  
space particles  
[NASA-CASE-XMS-04201] c14 N71-22990
- Development of combined velocimeter and  
accelerometer based on color changes in liquid  
crystalline material subjected to shear stresses  
[NASA-CASE-ERC-10292] c14 N72-25410
- Instrument for measuring magnitude and direction  
of flow velocity in flow field  
[NASA-CASE-LAR-10855-1] c14 N73-13415
- Doppler shift system --- system for measuring  
velocities of radiating particles  
[NASA-CASE-HQN-10740-1] c72 N74-19310
- Tachometer  
[NASA-CASE-MFS-23175-1] c35 N77-30436
- Velocity measurement system  
[NASA-CASE-MFS-23363-1] c35 N78-32396
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c34 N79-12359
- Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c06 N80-18036
- VELOCITY MODULATION**
- Selector mechanism for mechanical separation and  
discrimination of high velocity molecular  
particles  
[NASA-CASE-XLE-01533] c11 N71-10777
- Describing device for velocity control of  
electromechanical drive mechanism of scanning  
mirror of interferometer  
[NASA-CASE-XGS-03532] c14 N71-17627
- Coupled cavity traveling wave tube with velocity  
tapering  
[NASA-CASE-LFW-12296-1] c33 N80-19425
- VENTILATION**
- Protective garment ventilation system  
[NASA-CASE-XMS-04928] c54 N78-17679
- VENTILATORS**
- Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c54 N75-27761
- VENTING**
- Fuel tank pressure-relief device for venting  
cryogenic liquid vapors through tubes with  
porous plug  
[NASA-CASE-XLE-00288] c15 N70-34247
- Venting device for liquid propellant storage  
tank using magnetic field to separate liquid  
and gaseous phases  
[NASA-CASE-XLE-01449] c15 N70-41646
- Valve seat with resilient support ring for  
venting valves subjected to high pressure  
sealing loads  
[NASA-CASE-XKS-02582] c15 N71-21234
- Venting device for pressurized space suit helmet  
to eliminate vomit expelled by crewmen  
[NASA-CASE-XMS-09652-1] c05 N71-26333
- Solid propellant rocket engine with venting  
system to control effective nozzle throat area  
[NASA-CASE-XNP-03282] c28 N72-20758
- VENUS (PLANET)**
- Space simulator with uniform test region  
radiation distribution, adapted to simulate  
Venus solar radiations  
[NASA-CASE-XNP-00459] c11 N70-38675
- VERTICAL FLIGHT**
- Aircraft indicator for pilot control of takeoff  
roll, climbout path and verticle flight path  
in poor visibility conditions  
[NASA-CASE-XLA-00487] c14 N70-40157
- VERTICAL LANDING**
- Vertically descending flight vehicle landing  
gear for rough terrain  
[NASA-CASE-XMP-01174] c02 N70-41589
- VERTICAL TAKEOFF AIRCRAFT**
- Mechanical stabilization system for VTOL aircraft  
[NASA-CASE-XLA-06339] c02 N71-13422
- Development of attitude control system for  
vertical takeoff aircraft using reaction  
nozzles displaced from various axes of aircraft  
[NASA-CASE-XAC-08972] c02 N71-20570
- VERY HIGH FREQUENCIES**
- VHF/UHF parasitic probe antenna for spacecraft  
communication  
[NASA-CASE-XKS-09340] c07 N71-24614
- VERY LONG BASE INTERFEROMETRY**
- System for real-time crustal deformation  
monitoring  
[NASA-CASE-NPO-14124-1] c46 N80-14603
- VESTS**
- Lightweight life preserver without fastening  
devices  
[NASA-CASE-XMS-00864] c05 N70-36493
- VIBRATION**
- Three stage motion restraining mechanism for  
restraining and damping three dimensional  
vibrational movement of gimballed package  
during launch of spacecraft  
[NASA-CASE-GSC-10306-1] c15 N71-24694
- Vibration control of flexible bodies in steady  
accelerating environment  
[NASA-CASE-LAR-10106-1] c15 N71-27169
- VIBRATION DAMPING**
- Mercury filled pendulum damper for controlling  
bending vibration induced by wind effects  
[NASA-CASE-LAR-10274-1] c14 N71-17626
- Digital filter for reducing jitter in digital  
control systems  
[NASA-CASE-NPO-11088] c08 N71-29034

- Blade vibration damping pins for turbomachinery  
[NASA-CASE-XLE-00155] c28 N71-29154
- Active notch filter network with variable notch  
depth, width and frequency  
[NASA-CASE-FRC-11055-1] c33 N80-29583
- VIBRATION EFFECTS**
- Electromagnetic energy detection by thermal  
sensor with vibrating electrode  
[NASA-CASE-XAC-10768] c09 N71-18630
- Development of ultrasonic radiation equipment  
for removing material from host surface and  
vacuum apparatus for recovery of material  
[NASA-CASE-NPO-11213] c15 N73-20514
- Spherical bearing --- to reduce vibration effects  
[NASA-CASE-MFS-23447-1] c37 N79-11404
- VIBRATION ISOLATORS**
- Shock and vibration damping device using  
temperature sensitive solid amorphous polymers  
[NASA-CASE-XAC-11225] c14 N69-27486
- Miniature vibration isolator utilizing elastic  
tubing material  
[NASA-CASE-XLA-01019] c15 N70-40156
- Vibration damping system operating in low vacuum  
environment for spacecraft mechanisms  
[NASA-CASE-XMS-01620] c23 N71-15673
- Hermetically sealed vibration damper design for  
use in gimbal assembly of spacecraft inertial  
guidance system  
[NASA-CASE-HSC-10959] c15 N71-26243
- Tuned damped vibration absorber for mass  
vibrating in more than one degree of freedom  
for use with wind tunnel models  
[NASA-CASE-LAR-10083-1] c15 N71-27006
- Vibration isolation system, using coaxial  
helical compression springs  
[NASA-CASE-NPO-11012] c15 N72-11391
- Thrust-isolating mounting --- characteristics of  
support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c18 N74-27397
- Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c37 N75-18573
- Thermal insulation attaching means --- adhesive  
bonding of felt vibration insulators under  
ceramic tiles  
[NASA-CASE-HSC-12619-2] c27 N79-12221
- Shock isolator for operating a diode laser on a  
closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c37 N79-28549
- Decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c08 N80-22359
- VIBRATION MEASUREMENT**
- Development of system for measuring damping  
characteristics of structure or system  
subjected to random forces or influences  
[NASA-CASE-ARC-10154-1] c14 N72-22440
- Method and apparatus for vibration analysis  
utilizing the Mossbauer effect  
[NASA-CASE-XMF-05882] c35 N75-27329
- Displacement probes with self-contained exciting  
medium  
[NASA-CASE-LAR-11690-1] c35 N80-14371
- Ride quality meter  
[NASA-CASE-LAR-12882-1] c54 N81-31848
- VIBRATION METERS**
- Fiber optic transducers for monitoring and  
analysis of vibration in aerospace vehicles  
and onboard equipment  
[NASA-CASE-XMF-02433] c14 N71-10616
- Ride quality meter  
[NASA-CASE-LAR-12882-1] c54 N81-31848
- VIBRATION MODE**
- Function generators for producing complex  
vibration mode patterns used to identify  
vibration mode data  
[NASA-CASE-LAR-10310-1] c10 N73-20253
- VIBRATION SIMULATORS**
- Equipment for vibration testing of assemblies,  
components, and other articles  
[NASA-CASE-GSC-11302-1] c14 N73-13416
- VIBRATION TESTS**
- Electronic detection system for peak  
acceleration limits in vibrational testing of  
spacecraft components  
[NASA-CASE-NPO-10556] c14 N71-27185
- Fixture for supporting articles during vibration  
tests comprising integral annular unit  
[NASA-CASE-MFS-20523] c14 N72-27412
- Equipment for vibration testing of assemblies,  
components, and other articles  
[NASA-CASE-GSC-11302-1] c14 N73-13416
- Multiaxes vibration device for making vibration  
tests along orthogonal axes of test specimen  
[NASA-CASE-MFS-20242] c14 N73-19421
- Aeroelastic instability stoppers for wind-tunnel  
models  
[NASA-CASE-LAR-12458-1] c09 N81-31230
- VIBRATIONAL SPECTRA**
- Tuned damped vibration absorber for mass  
vibrating in more than one degree of freedom  
for use with wind tunnel models  
[NASA-CASE-LAR-10083-1] c15 N71-27006
- VIDEO COMMUNICATION**
- Circuitry for generating sync signals in FM  
communication systems including video  
information  
[NASA-CASE-XNF-10830] c07 N71-11281
- Monitoring circuit design for sampling circuit  
control and reduction of time-bandwidth in  
video communication systems  
[NASA-CASE-XNF-02791] c07 N71-23026
- Teletypewriter video communication system and  
apparatus  
[NASA-CASE-XNF-06611] c07 N71-26102
- Sampling video compression system  
[NASA-CASE-ARC-10984-1] c32 N77-24328
- VIDEO DATA**
- TV camera output signal control system for  
digital spacecraft communication  
[NASA-CASE-XNF-01472] c14 N70-41807
- Transient video signal tape recorder with  
expanded playback  
[NASA-CASE-ARC-10003-1] c09 N71-25866
- Restoration and improvement of demodulated  
facsimile video signals  
[NASA-CASE-GSC-10185-1] c07 N72-12081
- Dual digital video switcher  
[NASA-CASE-KSC-40782-1] c33 N75-30431
- Programmable scan/read circuitry for charge  
coupled device imaging detectors --- for a  
startracker  
[NASA-CASE-NFC-15345-1] c33 N81-27403
- VIDEO EQUIPMENT**
- Video signal processing system for sampling  
video brightness levels  
[NASA-CASE-NPO-10140] c07 N71-24742
- Video sync processor with phase locked system  
[NASA-CASE-KSC-10002] c10 N71-25865
- Teletypewriter video communication system and  
apparatus  
[NASA-CASE-XNF-06611] c07 N71-26102
- Video signal enhancement of signal component  
representing brightness of scene element in  
low contrast  
[NASA-CASE-NPO-10343] c07 N71-27341
- Circuitry for high input impedance video  
processor with high noise immunity  
[NASA-CASE-NPO-10199] c09 N72-17156
- Electronic video editor for switching video  
input signals to common output channel  
[NASA-CASE-KSC-10003] c10 N73-13235
- Video tape recorder with scan conversion  
playback for color television signals  
[NASA-CASE-NPO-10166-1] c07 N73-22076
- Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c35 N76-16391
- Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c45 N76-17656
- VIDICONS**
- Operation of vidicon tube for scanning spatial  
charge density pattern  
[NASA-CASE-XNF-06028] c09 N71-23189
- Device which separates and screens particles of  
soil samples for vidicon viewing in vacuum and  
reduced gravity environments  
[NASA-CASE-XNF-09770-3] c11 N71-27036
- VIEWING**
- Real-time 3D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c74 N82-10862
- VINYL POLYMERS**
- Method of producing output voltage from  
photovoltaic cell using poly-N-vinyl carbazole  
complexed with iodine  
[NASA-CASE-NFO-10373] c03 N71-18698
- Heat resistant polymers of oxidized  
styrylphosphine  
[NASA-CASE-HSC-14903-1] c27 N78-32256
- Compound oxidized styrylphosphine --- flame  
resistant vinyl polymers



- [NASA-CASE-MSC-14903-2] c27 N80-10358  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c27 N80-24438
- VINYLIDENE**  
Preparation of dicyanoacetylene and vinylidene copolymers using organic compounds  
[NASA-CASE-XNP-03250] c06 N71-23500
- VIRUSES**  
Water system virus detection  
[NASA-CASE-MSC-16098-1] c51 N79-10693
- VISCOELASTICITY**  
Automated ball rebound resilience test equipment for determining viscoelastic properties of polymers  
[NASA-CASE-XLA-08254] c14 N71-26161  
Development and characteristics of parallel plate viscometer for determination of absolute viscosity of liquids and viscoelastic materials  
[NASA-CASE-NPO-11387] c14 N73-14429  
Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c37 N75-18573  
Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c27 N81-15104
- VISCOMETERS**  
Describing instrument capable of measuring true shear viscosity of liquids and viscoelastic materials  
[NASA-CASE-XNP-09462] c14 N71-17584  
Development and characteristics of parallel plate viscometer for determination of absolute viscosity of liquids and viscoelastic materials  
[NASA-CASE-NPO-11387] c14 N73-14429
- VISCOSITY**  
Low density and low viscosity magnetic propellant for use under zero gravity conditions  
[NASA-CASE-XLE-01512] c12 N70-40124  
Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c35 N80-18357
- VISCOUS DAMPING**  
Shock and vibration damping device using temperature sensitive solid amorphous polymers  
[NASA-CASE-XAC-11225] c14 N69-27486  
Design and operation of viscous pendulum damper  
[NASA-CASE-XLA-02079] c12 N71-16894  
Mercury filled pendulum damper for controlling bending vibration induced by wind effects  
[NASA-CASE-LAR-10274-1] c14 N71-17626  
Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c37 N81-22360
- VISIBILITY**  
Controlled visibility device for simulating poor visibility conditions in training pilots in instrument landing and flight procedures  
[NASA-CASE-XFR-04147] c11 N71-10748
- VISIBLE SPECTRUM**  
Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c04 N82-16059
- VISORS**  
Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c23 N75-14834
- VISUAL ACUITY**  
Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c54 N75-27759
- VISUAL CONTROL**  
Visual target luminaires for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c31 N69-27499  
Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c04 N82-16059
- VISUAL FIELDS**  
Automated visual sensitivity tester for determining visual field sensitivity and blind spot size  
[NASA-CASE-ARC-10329-1] c05 N73-26072  
Visual examination apparatus  
[US-PATENT-RE-28,921] c52 N76-30793  
Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c74 N77-20882
- VISUAL OBSERVATION**  
Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c38 N78-17396
- VISUAL PERCEPTION**  
High pressure liquid flow sight assembly for wide temperature range applications including cryogenic fluids  
[NASA-CASE-XLE-02998] c14 N70-42074
- VISUAL STIMULI**  
Reaction tester for testing reaction to light stimuli  
[NASA-CASE-MSC-13604-1] c05 N73-13114
- VOICE COMMUNICATION**  
Position locating system for remote aircraft using voice communication and digital signals  
[NASA-CASE-GSC-10087-2] c21 N71-13958  
Earth satellite relay station for frequency multiplexed voice transmission  
[NASA-CASE-GSC-10118-1] c07 N71-24621  
Voice operated receiving and transmitting system for use in protective suits  
[NASA-CASE-KSC-10164] c07 N71-33108  
Technique for recovery of voice data from heat damaged magnetic tape  
[NASA-CASE-MSC-14219-1] c32 N74-27612  
Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c32 N76-21366  
Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c32 N76-31372  
Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c32 N80-20448
- VOICE DATA PROCESSING**  
Digital communication system  
[NASA-CASE-MSC-13912-1] c32 N74-30524
- VOLATILITY**  
Apparatus for determining volatile condensable material present in polymeric products  
[NASA-CASE-XNP-09699] c06 N71-24607
- VOLT-AMPERE CHARACTERISTICS**  
Simulating voltage-current characteristic curves of solar cell panel with different operational parameters  
[NASA-CASE-XMS-01554] c10 N71-10578  
The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c33 N77-10428  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193
- VOLTAGE AMPLIFIERS**  
Increasing power conversion efficiency of electronic amplifiers by power supply switching  
[NASA-CASE-XMS-00945] c09 N71-10798  
Bootstrap unloading circuits for sampling transducer voltage sources without drawing current  
[NASA-CASE-XNP-09768] c09 N71-12516  
RC networks with voltage amplifier, RC input circuit, and positive feedback  
[NASA-CASE-ARC-10020] c10 N72-17172  
Wide range analog to digital converter with variable gain amplifier  
[NASA-CASE-NPO-11018] c08 N72-21200  
Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c33 N80-18286
- VOLTAGE CONVERTERS (DC TO DC)**  
Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c33 N74-11049  
The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c33 N77-10428  
Inrush current limiter  
[NASA-CASE-GSC-11789-1] c33 N77-14333  
Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c33 N77-30365  
Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c33 N78-32341  
Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c33 N81-19392  
Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c33 N81-19393

- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NFO-14316-1] c33 N81-33404
- VOLTAGE GENERATORS**
- Pulsed energy power system for application of combustible gases to turbine controlling ac voltage generator  
[NASA-CASE-MSC-13112] c03 N71-11057
- Biotelemetry apparatus with dual voltage generators for implanting in animals  
[NASA-CASE-XAC-05706] c05 N71-12342
- Transistorized circuit for producing multiple slope voltage sweep  
[NASA-CASE-XMS-03542] c09 N71-28926
- Inductive-capacitive loops as load insensitive power converters  
[NASA-CASE-ERC-10268] c09 N72-25252
- Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c44 N80-18551
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c33 N81-31481
- VOLTAGE REGULATORS**
- Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c03 N69-21330
- Power control switching circuit using low voltage semiconductor controlled rectifiers for high voltage isolation  
[NASA-CASE-XNP-02713] c10 N69-39888
- Automatic measuring and recording of gain and zero drift characteristics of electronic amplifier  
[NASA-CASE-XMS-05562-1] c09 N69-39986
- Automatic control of voltage supply to direct current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39987
- Design, development, and operating principles of power supply with starting circuit which is independent of voltage regulator  
[NASA-CASE-XMS-01991] c09 N71-21449
- High voltage divider system for attenuating high voltages to convenient levels suitable for introduction to measuring circuits  
[NASA-CASE-XLE-02008] c09 N71-21583
- Power supply with overload protection for series stage transistor  
[NASA-CASE-XMS-00913] c10 N71-23543
- Voltage controlled, variable frequency relaxation oscillator with MOSFET variable current feed  
[NASA-CASE-GSC-10022-1] c10 N71-25882
- Design and development of buck-boost voltage regulator circuit with additive or subtractive alternating current impressed on variable direct current source voltage  
[NASA-CASE-GSC-10735-1] c10 N71-26085
- Voltage range selection apparatus for sensing and applying voltages to electronic instruments without loading signal source  
[NASA-CASE-XMS-06497] c14 N71-26244
- Dissipative voltage regulator system for minimizing heat dissipation  
[NASA-CASE-GSC-10891-1] c10 N71-26626
- Power point tracker for maintaining optimal output voltage of power source  
[NASA-CASE-GSC-10376-1] c14 N71-27407
- Microwave power divider for providing variable output power to output waveguide in fixed waveguide system  
[NASA-CASE-NPO-11031] c07 N71-33606
- Relay controlled voltage switching unit for scanning circuitry of star tracker  
[NASA-CASE-NPO-11253] c09 N72-17157
- Switching type voltage regulator with relatively simple circuit arrangement  
[NASA-CASE-LEW-11005-1] c09 N72-21243
- Inductive-capacitive loops as load insensitive power converters  
[NASA-CASE-ERC-10268] c09 N72-25252
- Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c33 N74-11049
- Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c33 N74-17929
- Low distortion automatic phase control circuit --- voltage controlled phase shifter  
[NASA-CASE-MFS-21671-1] c33 N74-22885
- Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c33 N75-19521
- Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c33 N78-17295
- Voltage regulator for battery power source --- using a bipolar transistor  
[NASA-CASE-PRC-10116-1] c33 N79-23345
- Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c33 N81-19392
- Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c33 N82-11360
- VOLTMETERS**
- Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c33 N75-19521
- VOLUMETRIC ANALYSIS**
- Volumetric direct nuclear pumped laser  
[NASA-CASE-LAB-12183-1] c36 N79-18307
- VOMITING**
- Venting device for pressurized space suit helmet to eliminate vomit expelled by crewmen  
[NASA-CASE-XMS-09652-1] c05 N71-26333
- VORTEX BREAKDOWN**
- Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAB-11645-1] c02 N77-10001
- VORTEX FLAPS**
- Leading edge vortex flaps for drag reduction --- during subsonic flight  
[NASA-CASE-LAB-12750-1] c02 N81-19016
- VORTEX GENERATORS**
- Multiple vortex amplifier system as fluid valve  
[NASA-CASE-IMP-04709] c15 N71-15609
- Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAB-12045-1] c34 N77-24423
- Wingtip vortex turbine  
[NASA-CASE-LAB-12544-1] c07 N81-27096
- VORTICES**
- Vortex-lift roll-control device  
[NASA-CASE-LAB-11868-2] c08 N79-14108
- VULCANIZING**
- Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAB-10489-1] c31 N74-18124

## W

## WAFERS

- Separation of semiconductor wafer into chips bounded by scribe lines  
[NASA-CASE-ERC-10138] c26 N71-14354
- Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c76 N78-24950
- System for slicing silicon wafers  
[NASA-CASE-NFO-14406-1] c37 N80-29703
- High voltage planar multijunction --- solar cells  
[NASA-CASE-LEW-13400-1] c44 N81-16528
- High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c44 N81-16529
- Scriber for silicon wafers  
[NASA-CASE-NPG-15539-1] c37 N82-11469

## WALL TEMPERATURE

- Thermocouple apparatus for measuring wall temperatures in regeneratively cooled rocket engines having thin walled cooling passages  
[NASA-CASE-XLE-05230-2] c14 N73-13417
- Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c34 N75-12222
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c34 N79-31523
- Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c34 N81-12363

## WALLS

- Metal ribbon wrapped outer wall for regeneratively cooled combustion chamber  
[NASA-CASE-XLE-00164] c15 N70-36411

## WARNING SYSTEMS

- Alarm system design for monitoring one or more relay circuits  
[NASA-CASE-XMS-10984-1] c10 N71-19417
- Unsaturating magnetic core transformer design with warning signal for electrical power processing equipment  
[NASA-CASE-ERC-10125] c09 N71-24893
- Electrical failure detector in solid rocket propellant motor insulation against thermal

degradation by fuel grain  
[NASA-CASE-XMF-03968] c14 N71-27186

Device for generating and controlling combustion products for testing of fire detection system  
[NASA-CASE-GSC-11095-1] c14 N72-10375

Vertically stacked collinear array of independently fed omnidirectional antennas for use in collision warning systems on commercial aircraft  
[NASA-CASE-LAR-10545-1] c09 N72-21244

Development and operating principles of collision warning system for aircraft accident prevention  
[NASA-CASE-HCN-10703] c21 N73-13643

Pilot warning indicator system of intruder aircraft  
[NASA-CASE-ERC-10226-1] c14 N73-16483

Silent alarm system for multiple room facility or school  
[NASA-CASE-NPO-11307-1] c10 N73-30205

Development and characteristics of electronic signalling system and data processing equipment for warning systems to avoid midair collisions between aircraft  
[NASA-CASE-LAR-10717-1] c21 N73-30641

Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c35 N74-18090

Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c33 N78-10375

Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c32 N79-10262

Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c33 N80-23559

Intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c35 N81-19430

**WASHING**

Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c27 N82-10227

**WASTE DISPOSAL**

Pecal waste disposal container  
[NASA-CASE-XMS-06761] c05 N69-23192

Airlock for waste transferal from pressurized enclosure aboard space vehicle to waste receiver at negative pressure  
[NASA-CASE-MFS-20922] c31 N72-20840

Pressurized tank for feeding liquid waste into processing equipment  
[NASA-CASE-LAR-10365-1] c05 N72-27102

Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c54 N74-20725

Airlock  
[NASA-CASE-MFS-20922-1] c18 N74-22136

Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c35 N75-19611

Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c54 N76-14804

Method and system for nuclear waste disposal --- control valves for encapsulating wastes  
[NASA-CASE-NPO-15454-1] c73 N82-12916

**WASTE ENERGY UTILIZATION**

Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183] c44 N80-29843

**WASTE UTILIZATION**

Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c45 N79-12584

**WASTE WATER**

Water system virus detection  
[NASA-CASE-MSC-16098-1] c51 N79-10693

Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c85 N79-17747

**WATER**

Variable water load for dissipating large amounts of electrical power during high voltage power supply tests  
[NASA-CASE-XNF-05381] c09 N71-20842

Gas chromatographic method for determining water in nitrogen tetroxide rocket propellant  
[NASA-CASE-NPO-10234] c06 N72-17094

Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c37 N76-16446

Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c44 N77-22607

Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c35 N78-27384

Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c44 N79-11470

**WATER FLOW**

Portable water dispenser  
[NASA-CASE-MFS-21115-1] c54 N74-12779

**WATER INJECTION**

Reentry communication by injection of water droplets into plasma layer surrounding space vehicle  
[NASA-CASE-XLA-01552] c07 N71-11284

**WATER LANDING**

Parachute system for lowering manned spacecraft from post-reentry to ocean landing  
[NASA-CASE-XLA-00195] c02 N70-38009

Spacecraft design with single point aerodynamic and hydrodynamic stability for emergency transport of men from space station to splashdown  
[NASA-CASE-MSC-13281] c31 N72-18859

**WATER MANAGEMENT**

Description of electrical equipment and system for purification of waste water by producing silver ions for bacterial control  
[NASA-CASE-MSC-10960-1] c03 N71-24718

Solar-powered pump  
[NASA-CASE-NPO-13567-1] c44 N76-29701

**WATER POLLUTION**

Utilization of solar radiation by solar still for converting salt and brackish water into potable water  
[NASA-CASE-XMS-04533] c15 N71-23086

Portable tester for monitoring bacterial contamination by adenosine triphosphate light reaction  
[NASA-CASE-GSC-10879-1] c14 N72-25413

Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c51 N80-27067

**WATER QUALITY**

Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c51 N78-22585

Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c34 N79-24285

Method and apparatus for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c51 N82-12739

**WATER RECLAMATION**

Potable water reclamation from human wastes in zero-G environment  
[NASA-CASE-XLA-03213] c05 N71-11207

Water system virus detection  
[NASA-CASE-MSC-16098-1] c51 N79-10693

Water separator  
[NASA-CASE-XMS-01295-1] c37 N79-21345

**WATER RESOURCES**

Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c43 N80-18498

**WATER TEMPERATURE**

Differential thermopile for measuring cooling water temperature rise  
[NASA-CASE-XAC-00812] c14 N71-15598

**WATER TREATMENT**

Description of electrical equipment and system for purification of waste water by producing silver ions for bacterial control  
[NASA-CASE-MSC-10960-1] c03 N71-24718

Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c25 N75-12087

Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c54 N78-14784

Water system virus detection  
[NASA-CASE-MSC-16098-1] c51 N79-10693

Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c45 N79-12584

Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c85 N79-17747

Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c45 N80-14579

- Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c27 N80-23452
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c27 N81-14076
- Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c45 N82-11634
- WATER VAPOR**
- Equipment for measuring partial water vapor pressure in gas tank  
[NASA-CASE-XMS-01618] c14 N71-20741
- Cell and method for electrolysis of water and anode  
[NASA-CASE-MS-C-16394-1] c28 N81-24280
- WATER WAVES**
- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c35 N79-10391
- Oceanic wave measurement system  
[NASA-CASE-MPS-23862-1] c48 N80-18667
- WATERPROOFING**
- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c37 N74-21063
- WATERWAVE ENERGY CONVERSION**
- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c44 N80-29834
- WAVE AMPLIFICATION**
- Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c71 N77-26919
- WAVE DIFFRACTION**
- Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c74 N80-21140
- WAVE FRONT RECONSTRUCTION**
- Recording and reconstructing focused image holograms  
[NASA-CASE-ERC-10017] c16 N71-15567
- WAVE GENERATION**
- Wind tunnel air flow modulating device and apparatus for selectively generating wave motion in wind tunnel airstream  
[NASA-CASE-XLA-00112] c11 N70-33287
- Linear sawtooth voltage wave generator with transistor timing circuit having capacitor and zener diode feedback loops  
[NASA-CASE-XMS-01315] c09 N70-41675
- Sign wave generation simulator for variable amplitude, frequency, damping, and phase pulses for oscilloscope display  
[NASA-CASE-NPO-10251] c10 N71-27365
- Wideband generator for producing sine wave quadrature and second harmonic of input signal  
[NASA-CASE-NPO-11133] c10 N72-20223
- Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c12 N75-24774
- WAVE PROPAGATION**
- Maser amplifier slow wave structure --- detecting weak signals from spacecraft  
[NASA-CASE-NPO-15211-1] c36 N81-24425
- WAVE REFLECTION**
- Surface defect detection by reflected microwave radiation pattern  
[NASA-CASE-ARC-10009-1] c15 N71-17822
- Millimeter wave antenna system for spacecraft use  
[NASA-CASE-GSC-10949-1] c07 N71-28965
- WAVE SCATTERING**
- Device and method for determining X ray reflection efficiency, scattering properties, and surface finish of optical surfaces  
[NASA-CASE-MPS-20243] c23 N73-13662
- WAVEFORMS**
- Variable frequency magnetic coupled multivibrator with output signal of constant amplitude and waveform  
[NASA-CASE-XGS-00131] c09 N70-38995
- Cathode ray oscilloscope for analyzing electrical waveforms representing amplitude distribution of time function  
[NASA-CASE-XNP-01383] c09 N71-10659
- Peak polarity selector for monitoring waveforms  
[NASA-CASE-PRC-10010] c10 N71-24862
- Development of family of frequency to amplitude converters for frequency analysis of complex input signal waveforms  
[NASA-CASE-MS-C-12395] c09 N72-25257
- Device for performing statistical time-series analysis of complex electrical signal waveforms  
[NASA-CASE-MS-C-12428-1] c10 N73-25240
- Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MS-C-14557-1] c32 N76-16249
- Speech analyzer  
[NASA-CASE-GSC-11898-1] c32 N77-30309
- Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c33 N79-10337
- WAVEGUIDE ANTENNAS**
- Planar array circularly polarized antenna with wall slot excitation  
[NASA-CASE-NPO-10301] c07 N72-11148
- WAVEGUIDE FILTERS**
- Microwave power divider for providing variable output power to output waveguide in fixed waveguide system  
[NASA-CASE-NPO-11031] c07 N71-33606
- WAVEGUIDE LASERS**
- Tunable injection-locked pulsed CO2 laser  
[NASA-CASE-NFO-14984-1] c36 N81-15350
- WAVEGUIDE WINDOWS**
- Broadband microwave waveguide window to compensate dielectric material filling  
[NASA-CASE-XNP-08880] c09 N71-24808
- WAVEGUIDES**
- Dual waveguide mode source for controlling amplitudes of two modes  
[NASA-CASE-XNP-03134] c07 N71-10676
- Design of folded traveling wave maser structure  
[NASA-CASE-XNP-05219] c16 N71-15550
- Quasi-optical microwave circuit with dielectric body for use with oversize waveguides  
[NASA-CASE-ERC-10011] c07 N71-29065
- Microwave waveguide mixer  
[NASA-CASE-ERC-10179] c07 N72-20141
- Waveguide, thin film window and microwave irises  
[NASA-CASE-LAR-10513-1] c07 N72-25170
- Development of thin film microwave iris installed in microwave waveguide transverse to flow of energy in waveguide  
[NASA-CASE-LAR-10511-1] c09 N72-29172
- Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c33 N75-26245
- Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c36 N76-18428
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c36 N80-18372
- Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NFO-14253-1] c32 N80-32605
- Coaxial phased array antenna  
[NASA-CASE-MS-C-16800-1] c32 N81-14187
- Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c33 N81-24348
- Maser amplifier slow wave structure --- detecting weak signals from spacecraft  
[NASA-CASE-NPO-15211-1] c36 N81-24425
- Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c33 N81-29344
- WAVELENGTHS**
- Method and apparatus using temperature control for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c16 N69-31343
- Multiple wavelength radiation measuring instrument for determining hot body or gas temperature  
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varying gravimetric environments  
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[NASA-CASE-XLA-03213] c05 N71-11207
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[NASA-CASE-XLA-01787] c11 N71-16028
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[NASA-CASE-XMS-06236] c14 N71-21007
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[NASA-CASE-NPO-14596-1] c31 N81-33319
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[NASA-CASE-XLF-02624] c12 N69-39988
- Apparatus for measuring human body mass in zero  
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[NASA-CASE-XMS-03371] c05 N70-42000
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[NASA-CASE-MFS-14671] c05 N71-12341
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[NASA-CASE-MSC-13972-1] c52 N74-10975
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[NASA-CASE-XNP-02588] c15 N71-18613
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- WELDED JOINTS**  
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austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c26 N76-18257
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 [NASA-CASE-MSC-19095-1] c37 N75-19683  
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 [NASA-CASE-MSC-19372-1] c39 N76-31562  
 Weld-bonded titanium structures  
 [NASA-CASE-LAR-11549-1] c37 N77-11397  
 Bimetallic junctions  
 [NASA-CASE-LBW-11573-1] c26 N77-28265

**WELDING**

Segmented back-up bar for butt welding large tubular structures such as rocket booster bodies or tanks  
 [NASA-CASE-XMF-00640] c15 N70-39924  
 Flexible backup bar for welding awkwardly shaped structures  
 [NASA-CASE-XMF-00722] c15 N70-40204  
 Apparatus for welding sheet material --- butt joints  
 [NASA-CASE-XMS-01330] c37 N75-27376  
 Weld-bonded titanium structures  
 [NASA-CASE-LAR-11549-1] c37 N77-11397  
 Method and apparatus for holding two separate metal pieces together for welding  
 [NASA-CASE-GSC-12318-1] c37 N80-23655

**WELDING MACHINES**

Computer controlled apparatus for maintaining welding torch angle and velocity during seam tracking  
 [NASA-CASE-XMF-03287] c15 N71-15607  
 Welding torch with automatic speed controller using speed sensing wheel and closed servo system  
 [NASA-CASE-XMF-01730] c15 N71-23050  
 Development of electric weeding torch with casing on one end to form inert gas shield  
 [NASA-CASE-XMF-02330] c15 N71-23798  
 Development of apparatus for automatically changing carriage speed of welding machine to obtain constant speed of torch along work surface  
 [NASA-CASE-XMF-07069] c15 N71-23815  
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 [NASA-CASE-MFS-23620-1] c37 N79-10421

**WET CELLS**

Indicator device for monitoring charge of wet cell battery, using semiconductor light emitter and photodetector  
 [NASA-CASE-NPO-10194] c03 N71-20407

**WETTING**

Anti-wettable materials brazing processes using titanium and zirconium for surface pretreatment  
 [NASA-CASE-XMS-03537] c15 N69-21471

**WHEATSTONE BRIDGES**

Self-balancing strain gage transducer with bridge circuit  
 [NASA-CASE-MFS-12827] c14 N71-17656  
 Development of method for improving signal to noise ratio and accuracy of Wheatstone bridge type radiation measuring instrument  
 [NASA-CASE-XLA-02810] c14 N71-25901  
 Temperature control system comprised of wheatstone bridge with EC circuit  
 [NASA-CASE-NPO-11304] c14 N73-26430

**WHISKER COMPOSITES**

Composites reinforced with short metal fibers or whiskers and having high tensile strength  
 [NASA-CASE-XLE-00228] c17 N70-38490

**WHISKERS (CRYSTALS)**

Catalyst for increased growth of boron carbide crystal whiskers  
 [NASA-CASE-XBQ-03903] c15 N69-21922

**WICKS**

Method of forming a wick for a heat pipe  
 [NASA-CASE-NPO-13391-1] c34 N76-27515

**WIDE ANGLE LENSES**

Wide angle eyepiece with long eye-relief distance  
 [NASA-CASE-XMS-06056-1] c23 N71-24857

**WIDEBAND COMMUNICATION**

Wideband heterodyne receiver for laser communication system  
 [NASA-CASE-GSC-12053-1] c32 N77-28346  
 Multiple band circularly polarized microstrip antenna  
 [NASA-CASE-MSC-18334-1] c32 N80-32604

**WINCHES**

Design and characteristics of device for showing amount of cable payed out from winch and load imposed

[NASA-CASE-MSC-12052-1] c15 N71-24599

**WIND EFFECTS**

Mercury filled pendulum damper for controlling bending vibration induced by wind effects  
 [NASA-CASE-LAR-10274-1] c14 N71-17626

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Passive optical wind and turbulence remote detection system  
 [NASA-CASE-XMF-14032] c20 N71-16340  
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 [NASA-CASE-MFS-20916] c14 N73-25460  
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 [NASA-CASE-NPO-13462-1] c35 N76-24524  
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 [NASA-CASE-MFS-23178-1] c35 N77-10493  
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 [NASA-CASE-MFS-23362-1] c47 N77-10753

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Free-fall body for obtaining wind velocity profiles by radar tracking  
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 Electric arc device for minimizing electrode ablation and heating gases to supersonic or hypersonic wind tunnel temperatures  
 [NASA-CASE-XAC-00319] c25 N70-41628  
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 [NASA-CASE-XLA-00939] c11 N71-15926  
 Burst diaphragm flow initiator for installation in short duration wind tunnels  
 [NASA-CASE-MFS-12915] c11 N71-17600  
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 [NASA-CASE-XAC-01677] c09 N71-20816  
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 [NASA-CASE-XNP-03578] c11 N71-23030  
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 [NASA-CASE-XLA-01326] c11 N71-21481  
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 [NASA-CASE-XLA-09480] c11 N71-33612  
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**X**

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 Apparatus for use in examining the lattice of a  
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 [NASA-CASE-MFS-23315-1] c76 N78-24950

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 --- fiber optics  
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 [NASA-CASE-XMS-02930] c11 N71-23042

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 [NASA-CASE-NPO-10657-1] c33 N80-14330

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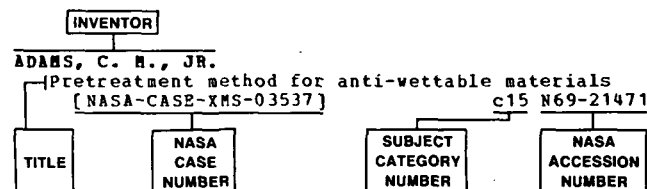
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[NASA-CASE-LEW-11877-1] c34 N78-27357  
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**BERG, O. E.**  
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Method and apparatus for shaping and enhancing acoustical levitation forces  
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[NASA-CASE-XLA-00678] c31 N70-34296

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[NASA-CASE-NPO-14298-1] c76 N80-32244  
Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c33 N81-19389

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**BHAT, B. N.**  
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**BHIVANDKER, N. C.**  
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**BICKNELL, T. J.**  
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[NASA-CASE-LEW-10518-1] c24 N72-33681  
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[NASA-CASE-LEW-11390-2] c25 N76-27383  
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[NASA-CASE-XLA-08645] c15 N69-21465  
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**COHEN, H. F.**  
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**COHEN, R. A.**  
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[NASA-CASE-ERC-10072] c09 N70-11148

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[NASA-CASE-ERC-10073-1] c24 N74-19769

**COHN, E. M.**  
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[NASA-CASE-HCN-10862-1] c44 N76-29699

**COHN, R. B.**  
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[NASA-CASE-FRC-10060-1] c14 N73-27379

**COHN, S. B.**  
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**COKEB, L. R.**  
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**COLBURN, H. E.**  
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**COLE, H. A., JR.**  
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[NASA-CASE-ARC-10154-1] c14 N72-22440

**COLE, M. A.**  
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[NASA-CASE-NPO-15197-1] c52 N81-26697

**COLE, P. T.**  
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[NASA-CASE-XGS-00373] c23 N71-15978

System for recording and reproducing pulse code modulated data Patent  
[NASA-CASE-XGS-01021] c08 N71-21042

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[NASA-CASE-XNP-08680] c14 N71-22995

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**COLES, W. D.**  
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[NASA-CASE-LEW-11726-1] c26 N73-26752

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[NASA-CASE-LEW-11015] c26 N73-32571

**COLLIER, L.**  
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**COLLIN, R. E.**  
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**COLLINS, D. D.**  
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[NASA-CASE-MSC-16258-1] c45 N79-12584

**COLLINS, D. F., JR.**  
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**COLLINS, R. R.**  
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[NASA-CASE-NFO-14558-1] c46 N80-24906

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[NASA-CASE-NPO-14406-1] c37 N80-29703

**COLLINS, E. R., JR.**  
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**COLLINS, V. G.**  
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**COLLINS, W. A.**  
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**COMANT, J. E.**  
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**COBE, C. D., JR.**  
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[NASA-CASE-XLA-00755] c01 N71-13410  
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[NASA-CASE-XLA-05828] c01 N71-13411  
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**CONGER, C. C.**  
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**CONIGLIO, G. V.**  
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**CONN, J. H.**  
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**CONNELL, E. W.**  
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**CONNOLLY, D. J.**  
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[NASA-CASE-LEW-12013-1] c33 N79-10339  
Coupled cavity traveling wave tube with velocity  
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aperture radar data  
[NASA-CASE-NPO-14998-1] c33 N81-15194

**CONWAY, E. J.**  
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[NASA-CASE-LAR-11405-1] c45 N76-31714

**COOGAN, J. H.**  
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[NASA-CASE-XAC-08494] c30 N71-15990

**COOK, T. A.**  
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**COOK, W. B., JR.**  
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**COON, G. W.**  
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[NASA-CASE-XAC-02807] c09 N71-23021  
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[NASA-CASE-LAR-11883-1] c09 N77-27131

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**COSTEN, R. C.**  
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[NASA-CASE-NPO-13652-2] c44 N79-24431

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[NASA-CASE-LAR-10717-1] c21 N73-30641  
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multiplex communications by digital phase  
shift of carrier  
[NASA-CASE-NPO-11338] c08 N72-25208  
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pulses in a single channel PCM communications  
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received signal for clocking receiver PN  
generator  
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[NASA-CASE-NPO-13910-1] c52 N79-27836  
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 [NASA-CASE-NPO-13535-1] c37 N76-31524  
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 [NASA-CASE-LAR-12269-1] c35 N80-18358  
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 contact device  
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 [NASA-CASE-MFS-21115-1] c54 N74-12779  
**CUNNINGHAM, J. W.**  
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**CUNNINGHAM, R. E.**  
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**CURREN, A. E.**  
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**D**

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**DAMERON, C. E.**  
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**DAMMIG, A. H., JR.**  
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**DANCHENKO, V.**  
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[NASA-CASE-LAR-10913] c14 N72-16282
- HUMMER, R. F.  
Scanner  
[NASA-CASE-GSC-12032-2] c43 N82-13465
- HUMPHREY, M. F.  
Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c85 N79-17747
- Ozonation of cooling tower waters  
[NASA-CASE-NFO-14340-1] c45 N80-14579
- HUNGERFORD, W. J.  
Conforming polisher for aspheric surface of revolution Patent  
[NASA-CASE-XGS-02884] c15 N71-22705
- HUNKLER, R. E.  
Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c18 N71-22998
- HUNT, G. H.  
System for the measurement of ultra-low stray light levels  
[NASA-CASE-MFS-23513-1] c74 N79-11865
- HUNT, J. G.  
Extrusion can  
[NASA-CASE-NPO-10812] c15 N73-13464
- HUNT, J. L.  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c15 N78-32168
- HUNT, S. R., JR.  
Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c54 N75-27759
- HUNTER, R. E.  
Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c33 N77-10429
- HUNTRESS, W. T.  
Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NFO-13479-1] c35 N77-10492
- HUNTRESS, W. T., JR.  
Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NFO-14324-1] c72 N80-27163
- HURD, W. A.  
System for the measurement of ultra-low stray light levels  
[NASA-CASE-MFS-23513-1] c74 N79-11865
- HURD, W. J.  
Digital filter for reducing sampling jitter in digital control systems Patent  
[NASA-CASE-NPO-11088] c08 N71-29034
- Transition tracking bit synchronization system  
[NASA-CASE-NPC-10844] c07 N72-20140
- Digital quasi-exponential function generator  
[NASA-CASE-NFO-11130] c08 N72-20176
- Code regenerative clean-up loop transponder for a mu-type ranging system  
[NASA-CASE-NFO-11707] c07 N73-25161
- HURSTA, W. E.  
Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c52 N82-11770
- HUSAIN-ABIDI, A. S.  
Optical data processing using paraboloidal mirror segments  
[NASA-CASE-GSC-11296-1] c23 N73-30666
- HUSCHKE, E. G., JR.  
Method of joining aluminum to stainless steel

Patent			
[NASA-CASE-MFS-07369]	c15	N71-20443	[NASA-CASE-NPO-13732-1] c44 N79-10513
Brazing alloy composition			Curable liquid hydrocarbon prepolymers
[NASA-CASE-XMP-06053]	c26	N75-27126	containing hydroxyl groups and process for
Brazing alloy			producing same
[NASA-CASE-XNP-03878]	c26	N75-27127	[NASA-CASE-NPO-13137-1] c27 N80-32514
HUSMANN, O. K.			Prepolymer dianhydrides
Multilayer porous ionizer Patent			[NASA-CASE-NPO-13899-1] c27 N80-32515
[NASA-CASE-XNP-04338]	c17	N71-23046	Sewage sludge additive
HUSSEY, M. W.			[NASA-CASE-NPO-13877-1] c45 N82-11634
Filter regeneration systems			INGHAM, K. T.
[NASA-CASE-MSC-14273-1]	c34	N75-33342	Locking device for turbine rotor blades Patent
HUTCHINSON, W. D.			[NASA-CASE-XNE-00816] c28 N71-28928
Manually actuated heat pump			INGLE, W. H.
[NASA-CASE-NPO-10677]	c05	N72-11084	Method of purifying metallurgical grade silicon
HUTCHISON, J. J.			employing reduced pressure atmospheric control
Trifunctional alcohol			[NASA-CASE-NPO-14474-1] c26 N80-14229
[NASA-CASE-NPO-10714]	c06	N69-31244	Quartz ball valve
Novel polycarboxylic prepolymeric materials and			[NASA-CASE-NPO-14473-1] c37 N80-23654
polymers thereof Patent			IRICK, S. C.
[NASA-CASE-NPO-10596]	c06	N71-25929	Ejectable underwater sound source recovery
HUTTO, R. J.			assembly
Radiation sensitive solid state switch			[NASA-CASE-LAR-10595-1] c35 N74-16135
[NASA-CASE-NPO-10817-1]	c08	N73-30135	IRONS, A. S.
HYMER, R. L.			Heat sterilizable patient ventilator
Audio signal processor Patent			[NASA-CASE-NPO-13313-1] c54 N75-27761
[NASA-CASE-MSC-12223-1]	c07	N71-26181	IRWIN, A. S.
I-LECHAO, J.			Drilled ball bearing with a one piece
Locking mechanism for orthopedic braces			anti-tipping cage assembly
[NASA-CASE-GSC-12082-1]	c54	N76-22914	[NASA-CASE-LEW-11925-1] c37 N75-31446
IANNINI, A. A.			IRWIN, K. S.
Pressure sensitive transducers Patent			Controlled visibility device for an aircraft
[NASA-CASE-ERC-10087]	c14	N71-27334	Patent
Semiconductor transducer device			[NASA-CASE-XPR-04147] c11 N71-10748
[NASA-CASE-ERC-10087-2]	c14	N72-31446	IRWIN, T. P.
IANNONE, M.			Leading edge protection for composite blades
Preparation of heterocyclic block copolymer			[NASA-CASE-LEW-12550-1] c24 N77-19170
omega-diamidoximes			ISLEY, W. C.
[NASA-CASE-ARC-11060-1]	c27	N79-22300	Heated porous plug microthruster
ICELAND, W. F.			[NASA-CASE-GSC-10640-1] c28 N72-18766
Grain refinement control in TIG arc welding			ITO, T. I.
[NASA-CASE-MSC-19095-1]	c37	N75-19683	Preparation of perfluorinated imidoylamidoximes
IDEN, B. B.			[NASA-CASE-ARC-11267-1] c23 N80-26386
Method for determining presence of OH in			Preparation of perfluorinated 1,2,4-oxadiazoles
magnesium oxide			[NASA-CASE-ARC-11267-2] c25 N80-26407
[NASA-CASE-NPO-10774]	c06	N72-17095	IVES, R. E.
IGENBERGS, E. B.			Computerized system for translating a torch head
Self-energized plasma compressor			[NASA-CASE-MFS-23620-1] c37 N79-10421
[NASA-CASE-MFS-22145-1]	c75	N75-13625	IVIE, C. V.
Two stage light gas-plasma projectile accelerator			Multi-channel rotating optical interface for
[NASA-CASE-MFS-22287-1]	c75	N76-14931	data transmission
Self-energized plasma compressor			[NASA-CASE-NPO-14066-1] c74 N79-34011
[NASA-CASE-MFS-22145-2]	c75	N76-17951	IWASAKI, N.
IGOE, W. B.			Control device Patent
Dynamic vibration absorber Patent			[NASA-CASE-XAC-10019] c15 N71-23809
[NASA-CASE-LAR-10083-1]	c15	N71-27006	IWASAKI, R. S.
ILES, P. A.			Electromagnetic power absorber
Method for producing a solar cell having an			[NASA-CASE-NPC-13830-1] c32 N80-14281
integral protective covering			
[NASA-CASE-XGS-04531]	c03	N69-24267	J
Method of coating solar cell with borosilicate			JACK, J. R.
glass and resultant product			Electro-thermal rocket Patent
[NASA-CASE-GSC-11514-1]	c03	N72-24037	[NASA-CASE-XLF-00267] c28 N70-33356
ILIG, W.			Electrothermal rockets having improved heat
Hydraulic grip Patent			exchange Patent
[NASA-CASE-XLA-05100]	c15	N71-17696	[NASA-CASE-XLF-01783] c28 N70-34175
Light shield and infrared reflector for fatigue			JACKSON, C. M., JR.
testing Patent			Wind tunnel model and method
[NASA-CASE-XLA-01782]	c14	N71-26136	[NASA-CASE-LAR-10812-1] c09 N74-17955
IMBOLDI, E.			JACKSON, K. E.
Tracking receiver Patent			Optical alignment system Patent
[NASA-CASE-XGS-08679]	c10	N71-21473	[NASA-CASE-XNP-02029] c14 N70-41955
IMIG, L.			JACKSON, L. E.
Heating and cooling system			Techniques for insulating cryogenic fuel
[NASA-CASE-LAR-12393-1]	c39	N80-25693	containers Patent
IMIG, L. A.			[NASA-CASE-XLA-01967] c31 N70-42015
Anti-buckling fatigue test assembly			Multwall thermal protection system
[NASA-CASE-LAR-10426-1]	c09	N74-19528	[NASA-CASE-LAR-12620-1] c24 N80-12117
Fatigue failure load indicator			Oribiter/launch system
[NASA-CASE-LAR-12027-1]	c39	N79-22537	[NASA-CASE-LAR-12250-1] c14 N81-26161
INLAY, E. H.			JACKSON, M. R.
Binary to binary-coded-decimal converter Patent			Directionally solidified eutectic gamma plus
[NASA-CASE-XNF-00432]	c08	N70-35423	beta nickel-base superalloys
INGHAM, J. D.			[NASA-CASE-LEW-12906-1] c26 N77-32279
Dual membrane hollow fiber fuel cell and method			Directionally solidified eutectic gamma-gamma
of operating same			nickel-base superalloys
			[NASA-CASE-LEW-12905-1] c26 N78-18183
			JACOB, D. S.
			Pressure modulating valve

[NASA-CASE-MSC-14905-1] c37 N77-28487

JACOBI, H.  
Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c71 N82-12889

JACOBS, L. H.  
Data compression system  
[NASA-CASE-XNP-09785] c08 N69-21928

JACOBS, J. H.  
Biocontamination and particulate detection system  
[NASA-CASE-NPO-13953-1] c35 N79-28527

JACOBS, E. B.  
Densitometer Patent  
[NASA-CASE-XLR-00688] c14 N70-41330

JACOBS, V. L.  
Passive propellant system  
[NASA-CASE-MFS-23642-2] c20 N78-27176  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c20 N80-10278

JACOBSON, D. S.  
Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c15 N73-14469

JAGON, R. B.  
Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MSC-14831-1] c25 N78-10225

JAIN, A.  
Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c32 N78-18266  
Surface roughness measuring system  
[NASA-CASE-NPO-13862-1] c35 N79-10391  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c32 N79-19195  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c32 N80-32607

JAKSTYS, V. J.  
Composite antenna feed  
[NASA-CASE-GSC-11046-1] c07 N73-28013

JALINK, A., JR.  
Method for improving the signal-to-noise ratio of the Wheatstone bridge type bolometer Patent  
[NASA-CASE-XLA-02810] c14 N71-25901  
Infrared horizon locator  
[NASA-CASE-LAR-10726-1] c14 N73-20475

JALUFKA, H. W.  
Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c36 N79-18307

JAMES, L. W.  
III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c33 N76-31409

JAMES, H. J.  
Resilient wheel Patent  
[NASA-CASE-MFS-13929] c15 N71-27091

JAMES, B.  
System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-PRC-11005-1] c06 N82-16075

JAMISON, H. H.  
Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c03 N71-29044

JANEFF, W.  
Tracking receiver Patent  
[NASA-CASE-XGS-08679] c10 N71-21473

JANKOWSKI, F.  
Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c37 N76-14463

JANNICHE, P. J., JR.  
Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c09 N71-23311

JANSEN, H. B.  
Fluid thrust control system  
[NASA-CASE-XMF-05964-1] c20 N79-21124

JAVAN, A.  
Method and apparatus for stabilizing a gaseous optical maser Patent  
[NASA-CASE-XGS-03644] c16 N71-18614

JEANE, H. L.  
Priority interrupt system  
[NASA-CASE-NPO-13067-1] c60 N76-18800

JECH, R. W.  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c17 N70-33288  
Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c17 N70-38198  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c17 N70-38490  
Method for producing fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-03925] c18 N71-22894

JEDLICKA, J. E.  
Solid medium thermal engine  
[NASA-CASE-ABC-10461-1] c44 N74-33379

JEFFERS, E.  
Method and apparatus for detecting coliform organisms  
[NASA-CASE-ABC-11322-1] c51 N82-12739

JEFFERS, E. L.  
Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c51 N78-22585  
Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c51 N80-16714  
Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c51 N80-27067

JEFFERY, P. A. E.  
Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c05 N81-19087

JEFFREYS, H. B.  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493

JELALIAN, A. V.  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c36 N75-15028  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493

JELLISON, J. C.  
Resilience testing device Patent  
[NASA-CASE-XLA-08254] c14 N71-26161

JENKINS, K. H.  
Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c09 N71-22796

JENKINS, L. H.  
Indexed keyed connection Patent  
[NASA-CASE-XMS-02532] c15 N70-41808

JENKINS, R. K.  
Thermally conductive polymers  
[NASA-CASE-GSC-11304-1] c06 N72-21105

JENNINGS, D. E.  
Thermal compensator for closed-cycle helium refrigerator  
[NASA-CASE-GSC-12168-1] c31 N79-17029  
Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c37 N79-28549

JENSEN, A. R.  
Separation nut Patent  
[NASA-CASE-XGS-01971] c15 N71-15922

JENSEN, C. A.  
Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c25 N72-24753  
Continuous plasma laser  
[NASA-CASE-XNP-04167-3] c36 N77-19416

JENSEN, R. J.  
Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c10 N71-27366

JENSEN, P. A.  
Low noise single aperture multimode monopulse antenna feed system Patent  
[NASA-CASE-XNP-01735] c07 N71-22750

JENSEN, R. N.  
Solar heating system  
[NASA-CASE-LAR-12009-1] c44 N78-15560  
Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c44 N80-20810

JEPPESEN, G. L.  
Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c37 N76-22540

JESSUP, A. D.  
Variable angle tube holder  
[NASA-CASE-LAR-10507-1] c11 N72-25284  
Lyophilized spore dispenser  
[NASA-CASE-LAR-10548-1] c37 N74-13178

JETER, J. D.  
Flammability test chamber Patent

[NASA-CASE-KSC-10126]	c11 N71-24985	[NASA-CASE-HQN-10880-1]	c17 N78-17140
JEWELL, P. A.		JOHNSON, E. T.	
Data handling system based on source		Automated clinical system for chromosome analysis	
significance, storage availability and data		[NASA-CASE-NPO-13913-1]	c52 N79-12694
received from the source Patent Application		JOHNSON, F. W.	
[NASA-CASE-XNP-04162-1]	c08 N70-34675	Heat conductive resiliently compressible	
JEWELL, R. A.		structure for space electronics package	
Production of high purity silicon carbide Patent		modules Patent	
[NASA-CASE-XLA-00158]	c26 N70-36805	[NASA-CASE-MSC-12389]	c33 N71-29052
Apparatus for producing high purity silicon		JOHNSON, H. G.	
carbide crystals Patent		Electronic checkout system for space vehicles	
[NASA-CASE-XLA-02057]	c26 N70-40015	Patent	
Method of coating carbonaceous base to prevent		[NASA-CASE-XKS-08012-2]	c31 N71-15566
oxidation destruction and coated base Patent		JOHNSON, H. I.	
[NASA-CASE-XLA-00284]	c15 N71-16075	Training vehicle for controlling attitude Patent	
Method of coating carbonaceous base to prevent		[NASA-CASE-XMS-02977]	c11 N71-10746
oxidation destruction and coated base Patent		Gravity stabilized flying vehicle Patent	
[NASA-CASE-XLA-00302]	c15 N71-16077	[NASA-CASE-MSC-12111-1]	c02 N71-11039
JEX, D. W.		Hand-held self-maneuvering unit Patent	
Liquid aerosol dispenser		[NASA-CASE-XMS-05304]	c05 N71-12336
[NASA-CASE-MFS-20829]	c12 N72-21310	Fluid power transmission Patent	
Two stage light gas-plasma projectile accelerator		[NASA-CASE-XMS-01445]	c12 N71-16031
[NASA-CASE-MFS-22287-1]	c75 N76-14931	Subgravity simulator Patent	
JHABVALA, M. D.		[NASA-CASE-XMS-04798]	c11 N71-21474
An implantable electrical device		Pneumatic amplifier Patent	
[NASA-CASE-GSC-12560-1]	c52 N80-27073	[NASA-CASE-MSC-12121-1]	c15 N71-27147
Method of making V-MOS field effect transistors		JOHNSON, J. C., JR.	
utilizing a two-step anisotropic etching and		Mechanical actuator Patent	
ion implantation		[NASA-CASE-XGS-04548]	c15 N71-24045
[NASA-CASE-GSC-12515-1]	c33 N81-26360	JOHNSON, J. D.	
JHABVALA, M. O.		Wrist joint assembly	
Complementary DMOS-VMOS integrated circuit		[NASA-CASE-MFS-23311-1]	c54 N78-17676
structure		JOHNSON, J. E.	
[NASA-CASE-GSC-12190-1]	c33 N79-12321	Variable cycle gas turbine engines	
JOBSCH, D. J.		[NASA-CASE-LEW-12916-1]	c37 N78-17384
Spectrometer integrated with a facsimile camera		JOHNSON, J. E., JR.	
[NASA-CASE-LAR-11207-1]	c35 N75-19613	Micro-fluid exchange coupling apparatus	
JOHANNSEN, K. G.		[NASA-CASE-ARC-11114-1]	c51 N81-14605
Systems and methods for determining radio		JOHNSON, J. L.	
frequency interference		Method and apparatus for shaping and enhancing	
[NASA-CASE-GSC-12150-1]	c32 N79-11265	acoustical levitation forces	
JOHANSEN, D. L.		[NASA-CASE-MFS-25050-1]	c71 N81-15767
Articulated multiple couch assembly Patent		JOHNSON, J. L., JR.	
[NASA-CASE-MSC-11253]	c05 N71-12343	High lift aircraft	
Collapsible Apollo couch		[NASA-CASE-LAR-11252-1]	c05 N75-25914
[NASA-CASE-MSC-13140]	c05 N72-11085	JOHNSON, K. G.	
JOHNS, C. E.		Positioning mechanism	
Continuously variable voltage controlled phase		[NASA-CASE-NPO-10679]	c15 N72-21462
shifter		JOHNSON, R. C.	
[NASA-CASE-NPO-11129]	c09 N72-33204	Enthalpy and stagnation temperature	
JOHNSON, A. L., JR.		determination of a high temperature laminar	
Microelectronic module package Patent		flow gas stream Patent	
[NASA-CASE-XMS-02182]	c10 N71-28783	[NASA-CASE-XLI-00266]	c14 N70-34156
JOHNSON, C. B.		JOHNSON, R. D.	
Hypersonic test facility Patent		Gas path seal	
[NASA-CASE-XLA-00378]	c11 N71-15925	[NASA-CASE-NPC-12131-3]	c37 N80-18400
Hypersonic test facility Patent		JOHNSON, R. E.	
[NASA-CASE-XLA-05378]	c11 N71-21475	Acquisition and tracking system for optical radar	
Image tube		[NASA-CASE-MFS-20125]	c16 N72-13437
[NASA-CASE-GSC-11602-1]	c33 N74-21850	JOHNSON, R. L.	
JOHNSON, C. C.		Gas lubricant compositions Patent	
Visual target for retrofire attitude control		[NASA-CASE-XLI-00353]	c18 N70-39897
[NASA-CASE-XMS-12158-1]	c31 N69-27499	Metallic film diffusion for boundary lubrication	
Orbital escape device Patent		Patent	
[NASA-CASE-XMS-06162]	c31 N71-28851	[NASA-CASE-XLI-01765]	c18 N71-10772
Stand-off type ablative heat shield		Alloys for bearings Patent	
[NASA-CASE-MSC-12143-1]	c33 N72-17947	[NASA-CASE-XLP-05033]	c15 N71-23810
Amplitude steered array		Metallic film diffusion for boundary lubrication	
[NASA-CASE-GSC-11446-1]	c33 N74-20860	Patent	
Reverse osmosis membrane of high urea rejection		[NASA-CASE-XLE-10337]	c15 N71-24046
properties		JOHNSON, V. E., JR.	
[NASA-CASE-ARC-10980-1]	c27 N80-23452	Hydrofoil Patent	
JOHNSON, C. C., JR.		[NASA-CASE-XLA-00229]	c12 N70-33305
Space capsule Patent		JOHNSTON, A. R.	
[NASA-CASE-XLA-00149]	c31 N70-37938	Polarimeter for transient measurement Patent	
Space capsule Patent		[NASA-CASE-INP-08883]	c23 N71-16101
[NASA-CASE-XLA-01332]	c31 N71-15664	Light direction sensor	
JOHNSON, C. E.		[NASA-CASE-NPO-11201]	c14 N72-27409
Impact testing machine Patent		Cooperative multiaxis sensor for teleoperation	
[NASA-CASE-XNP-04817]	c14 N71-23225	of article manipulating apparatus	
JOHNSON, C. L.		[NASA-CASE-NEO-13386-1]	c54 N75-27758
Molding process for imidazopyrrolone polymers		Stark-effect modulation of CO2 laser with NH2D	
[NASA-CASE-LAR-10547-1]	c31 N74-13177	[NASA-CASE-NPC-11945-1]	c36 N76-18427
JOHNSON, C. W.		Focal plane array optical proximity sensor	
Method of resolving clock synchronization error		[NASA-CASE-NFC-15155-1]	c74 N81-22894
and means therefor Patent		JOHNSTON, E. A.	
[NASA-CASE-XNP-08875]	c10 N71-23099	Variable area exhaust nozzle	
JOHNSON, E. G.		[NASA-CASE-LEW-12378-1]	c07 N79-14097
System and method for tracking a signal source			

JOHNSTON, J. D.  
Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c37 N77-23483  
Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c18 N79-11108  
Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c54 N81-26718

JOHNSTON, J. E.  
Electrostatic measurement system  
[NASA-CASE-MFS-22129-1] c33 N75-18477

JOHNSTON, M. H.  
Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
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MARTINECK, H. G.  
Electrical connector for flat cables  
[NASA-CASE-XMF-00324] c09 N70-34596  
Printed cable connector Patent  
[NASA-CASE-XMF-00369] c09 N70-36494  
Method of making a molded connector  
[NASA-CASE-XMF-03498] c15 N71-15986  
Electrical connector  
[NASA-CASE-MFS-20757] c09 N72-28225

MARTUCCI, V. J.  
Tuning arrangement for an electron discharge  
device or the like Patent  
[NASA-CASE-XNP-09771] c09 N71-24841

MARTZ, E. L.  
Externally pressurized fluid bearing Patent  
[NASA-CASE-XMF-00515] c15 N70-34664

MARVIN, I. E.  
Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c07 N81-19116

MARZEK, R. A.  
Tool for use in lifting pin supported objects  
[NASA-CASE-NFO-13157-1] c37 N74-32918

MASCI, A. C.  
Deep space monitor communication satellite  
system Patent  
[NASA-CASE-XAC-06029-1] c31 N71-24813

MASEK, T. D.  
Electron bombardment ion engine Patent  
[NASA-CASE-XNP-04124] c28 N71-21822  
Feed system for an ion thruster  
[NASA-CASE-NFC-10737] c28 N72-11709

MASERJIAN, J.  
Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c14 N69-39937  
Thin film capacitive bolometer and temperature  
sensor Patent  
[NASA-CASE-NPO-10607] c09 N71-27232  
Thin film temperature sensor and method of  
making same  
[NASA-CASE-NPO-11775] c26 N72-28761  
Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c35 N74-15090  
Deep trap, laser activated image converting system  
[NASA-CASE-NFO-13131-1] c36 N75-19652  
Stored charge transistor  
[NASA-CASE-NPO-11156-2] c33 N75-31331  
Method and apparatus for measurement of trap  
density and energy distribution in dielectric  
films  
[NASA-CASE-NFO-13443-1] c76 N76-20994  
Chemical vapor deposition reactor  
[NASA-CASE-NPO-13650-1] c25 N79-28253  
Induced junction solar cell and method of  
fabrication  
[NASA-CASE-NPO-13786-1] c44 N80-29835

MASLOWSKI, E. A.  
Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c24 N75-33181

MASON, J. H.  
Microcomputerized electric field meter  
diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411

MASON, R. J.  
Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c09 N71-20658

MASON, R. H.  
Radial module space station Patent  
[NASA-CASE-XMS-01906] c31 N70-41373

MASSUCCO, A. A.  
Non-flammable elastomeric fiber from a  
fluorinated elastomer and containing an  
halogenated flame retardant

[NASA-CASE-MSC-14331-1]	c27 N76-24405	Missile stage separation indicator and stage initiator Patent	
Flame retardant spandex type polyurethanes		[NASA-CASE-XLA-00791]	c03 N70-39930
[NASA-CASE-MSC-14331-2]	c27 N78-17213	Detector panels-micrometeoroid impact Patent	
Process for spinning flame retardant elastomeric compositions		[NASA-CASE-XLA-05906]	c31 N71-16221
[NASA-CASE-MSC-14331-3]	c27 N78-32262		
MATEER, G. C.		Electric-arc heater Patent	
Flow separation detector		[NASA-CASE-XLA-00330]	c33 N70-34540
[NASA-CASE-ARC-11046-1]	c35 N78-14364		
MATHUR, P. P.		Application of semiconductor diffusants to solar cells by screen printing	
Program for computer aided reliability estimation		[NASA-CASE-LEW-12775-1]	c44 N79-11468
[NASA-CASE-NPO-13086-1]	c15 N73-12495		
MATSUHIRO, D. S.		MAZER, L.	
Shoulder harness and lap belt restraint system		Analog-to-digital conversion system Patent	
[NASA-CASE-ARC-10519-2]	c05 N75-25915	[NASA-CASE-XAC-00404]	c08 N70-40125
MATSUMOTO, Y.		MAZUR, J. T.	
Sampling video compression system		Telescoping columns	
[NASA-CASE-ARC-10984-1]	c32 N77-24328	[NASA-CASE-LAR-12195-1]	c31 N81-27324
MATTAUCH, R. J.		MCAPPE, D. F.	
Infrared detectors		Bi-polar phase detector and corrector for split phase PCM data signals Patent	
[NASA-CASE-LAR-10728-1]	c14 N73-12445	[NASA-CASE-XGS-01590]	c07 N71-12392
MATTHEWS, P. R., JR.		Radio frequency coaxial high pass filter Patent	
Lightweight, variable solidity knitted parachute fabric		[NASA-CASE-XGS-01418]	c09 N71-23573
[NASA-CASE-LAR-10776-1]	c02 N74-10034	MCALBANDER, B. T.	
MATZEN, W. J.		Laser head for simultaneous optical pumping of several dye lasers	
Apparatus for measuring semiconductor device resistance		[NASA-CASE-LAR-11341-1]	c36 N75-19655
[NASA-CASE-NPO-14424-1]	c33 N80-32650	MCBRYAR, R. O.	
MAULDIN, D. G.		Soft frame adjustable eyeglasses Patent	
Contourograph system for monitoring electrocardiograms		[NASA-CASE-XMS-06064]	c05 N71-23096
[NASA-CASE-MSC-13407-1]	c10 N72-20225	MCBRYAR	
MAXWELL, H. G.		Ion-exchange membrane with platinum electrode assembly Patent	
Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement		[NASA-CASE-XMS-02063]	c03 N71-29044
[NASA-CASE-NPO-13764-1]	c27 N78-17215	MCBRYAR, H.	
MAXWELL, H. S.		Reconstituted asbestos matrix	
Spacecraft attitude detection system by stellar reference Patent		[NASA-CASE-MSC-12568-1]	c24 N76-14204
[NASA-CASE-XGS-03431]	c21 N71-15642	MCCAIG, J. C.	
Programmable telemetry system Patent		Electric arc welding Patent	
[NASA-CASE-GSC-10131-1]	c07 N71-24624	[NASA-CASE-XMF-00392]	c15 N70-34814
Plural beam antenna		MCCALLUM, J.	
[NASA-CASE-GSC-11013-1]	c09 N73-19234	Porus electrode comprising a bonded stack of pieces of corrugated metal foil	
MAXWELL, H. W.		[NASA-CASE-GSC-11368-1]	c09 N73-32108
Helical coaxial resonator RF filter		MCCAMPBELL, W. M.	
[NASA-CASE-XGS-02816]	c07 N69-24323	Electric arc welding Patent	
MAXWELL, R. F., JR.		[NASA-CASE-XMF-00392]	c15 N70-34814
Electronic background suppression method and apparatus for a field scanning sensor		Weld control system using thermocouple wire Patent	
[NASA-CASE-XGS-05211]	c07 N69-39980	[NASA-CASE-MFS-06074]	c15 N71-20393
MAXWELL, W. A.		RC rate generator for slow speed measurement Patent	
Process of casting heavy slips Patent		[NASA-CASE-XMF-02966]	c10 N71-24863
[NASA-CASE-XLE-00106]	c15 N71-16076	A dc motor speed control system Patent	
MAY, C. E.		[NASA-CASE-MFS-14610]	c09 N71-28886
Selective nickel deposition		MCCANDLESS, L. C.	
[NASA-CASE-LEW-10965-1]	c15 N72-25452	Method of making reinforced composite structure	
Production of pure metals		[NASA-CASE-LEW-12619-1]	c24 N77-19171
[NASA-CASE-LEW-10906-1]	c25 N74-30502	MCCANN, D. H.	
Process for making anhydrous metal halides		Phototransistor	
[NASA-CASE-LEW-11860-1]	c37 N76-18458	[NASA-CASE-MFS-20407]	c09 N73-19235
Method of cross-linking polyvinyl alcohol and other water soluble resins		Time delay and integration detectors using charge transfer devices	
[NASA-CASE-LEW-13103-1]	c27 N80-32516	[NASA-CASE-GSC-12324-1]	c33 N81-33403
MAYALL, S. D.		MCCANN, R. J.	
Frictionless universal joint Patent		Device for handling heavy loads	
[NASA-CASE-NPO-10646]	c15 N71-28467	[NASA-CASE-XMF-04969]	c11 N69-27466
MAYER, L. A.		MCCARTHY, D. M.	
Chelate-modified polymers for atmospheric gas chromatography		Automatic level control circuit	
[NASA-CASE-ARC-11154-1]	c25 N80-23383	[NASA-CASE-KSC-11170-1]	c33 N81-29347
Fire extinguishant materials		MCCARTY, J. L.	
[NASA-CASE-ARC-11252-1]	c25 N82-12168	Lunar penetrometer Patent	
MAYNARD, O. E.		[NASA-CASE-XLA-00934]	c14 N71-22765
Radial module space station Patent		MCCAUL, P. F.	
[NASA-CASE-XMS-01906]	c31 N70-41373	Sidereal frequency generator Patent	
MAYNE, R. C.		[NASA-CASE-XGS-02610]	c14 N71-23174
Shock absorbing mount for electrical components		MCCHESENEY, J. F., JR.	
[NASA-CASE-NPO-13253-1]	c37 N75-18573	High voltage distributor	
MAYO, E. E.		[NASA-CASE-GSC-11849-1]	c33 N76-16332
Hypersonic reentry vehicle Patent		MCCHESENEY, J. R.	
[NASA-CASE-XMS-04142]	c31 N70-41631	Modulator for tone and binary signals	
MAYO, J. W.		[NASA-CASE-GSC-11743-1]	c32 N75-24981
Connector - Electrical		MCCLESE, D. J.	
[NASA-CASE-XLA-01288]	c09 N69-21470	Method and apparatus for Doppler frequency modulation of radiation	
Tubular coupling having frangible connecting means		[NASA-CASE-NFO-14524-1]	c32 N80-24510
[NASA-CASE-XLA-02854]	c15 N69-27490	MCCLENNAN, J. O.	
		High speed shutter	
		[NASA-CASE-ARC-10516-1]	c70 N74-21300

Photomultiplier circuit including means for rapidly reducing the sensitivity thereof  
[NASA-CASE-ARC-10593-1] c33 N74-27682

**MCCLUNEY, W. R.**  
The 2 deg/90 deg laboratory scattering photometer  
[NASA-CASE-GSC-12088-1] c74 N78-13874

**MCCLURG, C. E.**  
Antenna grout replacement system  
[NASA-CASE-NPO-15205-1] c37 N81-19457

**MCCLURE, J. C.**  
Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c26 N80-23419

**MCCLURE, S. R.**  
Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c37 N80-23655

**MCCONAUGHEY, R. T.**  
Star scanner  
[NASA-CASE-GSC-11569-1] c89 N74-30886

**MCCONNELL, J. C.**  
Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c17 N71-25903

**MCCORMACK, W.**  
Single action separation mechanism Patent  
[NASA-CASE-XLA-00188] c15 N71-22874

**MCCORMICK, C. T., JR.**  
Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c14 N71-26244

**MCCRAW, D. L.**  
Emergency escape system Patent  
[NASA-CASE-MSC-12086-1] c05 N71-12345

**MCCREA, F. E.**  
Indexing microwave switch Patent  
[NASA-CASE-XNP-06507] c09 N71-23548  
Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c32 N80-32605

**MCCREARY, R. A.**  
Parallel motion suspension device Patent  
[NASA-CASE-XNP-01567] c15 N70-41310

**MCCREIGHT, L. R.**  
Electrophoretic sample insertion  
[NASA-CASE-MFS-21395-1] c25 N74-26948  
Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c34 N74-27744

**MCCUSKER, T. J.**  
Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c03 N70-41580

**MCDANIELS, D. L.**  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c17 N70-33288  
Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c17 N70-36198  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c17 N70-38490

**MCDARIS, R. A.**  
Emergency escape system Patent  
[NASA-CASE-XKS-07814] c15 N71-27067

**MCDONALD, L. S.**  
Specific wavelength colorimeter  
[NASA-CASE-MSC-14081-1] c35 N74-27860

**MCDONALD, D. K.**  
Synchronous counter Patent  
[NASA-CASE-XGS-02440] c08 N71-19432

**MCDEVITT, P. R.**  
Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c16 N72-12440

**MCDONALD, G. E.**  
Nuclear fuel elements  
[NASA-CASE-XLE-00209] c22 N73-32528  
Selective coating for solar panels  
[NASA-CASE-LEW-12159-1] c44 N78-15599  
Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c26 N81-24230  
Method of forming oxide coatings  
[NASA-CASE-LEW-13132-1] c44 N81-27616

**MCDONALD, R. T.**  
Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c12 N71-26546  
Respiration monitor  
[NASA-CASE-FRC-10012] c14 N72-17329

**MCDONALD, A. R.**  
Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c15 N71-27432  
Quick disconnect coupling  
[NASA-CASE-NFO-11202] c15 N72-25450  
Rotary actuator  
[NASA-CASE-NPO-10680] c31 N73-14855  
Disconnect unit  
[NASA-CASE-NPO-11330] c33 N73-26958  
Zero torque gear head wrench  
[NASA-CASE-NFO-13059-1] c37 N76-20480  
Phase-angle controller for Stirling engines  
[NASA-CASE-NFO-14388-1] c37 N81-17432  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c37 N81-25370  
Solar energy modulator  
[NASA-CASE-NPO-15388-1] c44 N82-10496

**MCKERLEAN, E. A.**  
Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c24 N75-30260

**MCFADIN, L. W.**  
Platinum resistance thermometer circuit  
[NASA-CASE-MSC-12327-1] c35 N77-27368

**MCGANNON, W. J.**  
Ophthalmic method and apparatus  
[NASA-CASE-LEW-11669-1] c05 N73-27062  
Ophthalmic liquifaction pump  
[NASA-CASE-LEW-12051-1] c52 N75-33640  
Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c52 N80-18690

**MCGHEE, J. R.**  
Frangible tube energy dissipation Patent  
[NASA-CASE-XLA-00754] c15 N70-34850  
Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c31 N71-16085

**MCGOUGH, J. T.**  
Emergency escape system Patent  
[NASA-CASE-XKS-07814] c15 N71-27067

**MCHAFFIE, D. J.**  
Extensible cable support Patent  
[NASA-CASE-XNF-07587] c15 N71-18701

**MCHATTON, A. D.**  
Canister closing device Patent  
[NASA-CASE-XLA-01446] c15 N71-21528  
Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c15 N71-24164  
Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c35 N77-22449  
Nozzle extraction process and handlemeter for measuring handle  
[NASA-CASE-LAR-12147-1] c31 N79-11246

**MCHENRY, T. F.**  
Miniature carbon dioxide sensor and methods  
[NASA-CASE-MSC-13332-1] c14 N72-21408

**MCHUGH, D. P.**  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067

**MCINTOSH, M. J.**  
Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c28 N80-23471

**MCKAY, R. A.**  
Combuster  
[NASA-CASE-NPO-13958-1] c25 N79-11151

**MCKEE, C. W.**  
Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c34 N75-26282

**MCKENNA, J. P., JR.**  
Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c35 N75-30504

**MCKENNA, R. T.**  
Automatic character skew and spacing checking network  
[NASA-CASE-GSC-11925-1] c33 N76-18353

**MCKENZIE, R. L.**  
Diatonic infrared gasdynamic laser  
[NASA-CASE-ARC-10370-1] c36 N75-31426

**MCKEOWN, D.**  
Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c26 N77-29260

**MCKEVITT, P. X.**  
Swirling flow nozzle Patent  
[NASA-CASE-XNP-03692] c28 N71-24321

**MCKINNEY, R. L.**  
Self-calibrating displacement transducer Patent

[NASA-CASE-XLA-00781]	c09 N71-22999	characteristics and flux distribution of micrometeorites	c91 N74-13130
MCKINNON, R. A.		[NASA-CASE-NPO-12127-1]	
External liquid-spray cooling of turbine blades		MELAMED, L.	
Patent		Angular velocity and acceleration measuring apparatus	
[NASA-CASE-XLE-00037]	c28 N70-33372	[NASA-CASE-ERC-10292]	c14 N72-25410
MCLAIN, J. B.		MELPI, L. T., JR.	
Air bearing Patent		Gas analyzer for bi-gaseous mixtures Patent	
[NASA-CASE-XMF-01887]	c15 N71-10617	[NASA-CASE-XLA-01131]	c14 N71-10774
MCLAUCHLAN, J. B.		Ionization vacuum gauge with all but the end of the ion collector shielded Patent	c14 N71-18482
Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent		[NASA-CASE-XLA-07424]	
[NASA-CASE-XNP-06957]	c14 N71-21088	MELLARS, B.	
Light position locating system Patent		Wideband heterodyne receiver for laser communication system	
[NASA-CASE-XNP-01059]	c23 N71-21821	[NASA-CASE-GSC-12053-1]	c32 N77-28346
MCLAREN, P. E.		MELUGIN, J. F.	
Supersonic aircraft Patent		Technique for recovery of voice data from heat damaged magnetic tape	
[NASA-CASE-XLA-04451]	c02 N71-12243	[NASA-CASE-MSC-14219-1]	c32 N74-27612
MCLYMAN, C. W. T.		MELVILLE, R. D. S.	
Inverter oscillator with voltage feedback		Stark-effect modulation of CO <sub>2</sub> laser with NH <sub>2</sub> D	
[NASA-CASE-NPO-10760]	c09 N72-25254	[NASA-CASE-NFC-11945-1]	c36 N76-18427
Banded transformer cores		MENEFEE, E. O.	
[NASA-CASE-NPO-11966-1]	c33 N74-17928	Three-axis controller Patent	
MCLYMAN, W. T.		[NASA-CASE-XAC-01404]	c05 N70-41581
Phase substitution of spare converter for a failed one of parallel phase staggered converters		Proportional controller Patent	
[NASA-CASE-NPO-13812-1]	c33 N77-30365	[NASA-CASE-XAC-03392]	c03 N70-41954
Elimination of current spikes in buck power converters		MENGES, M. J.	
[NASA-CASE-NPO-14505-1]	c33 N81-19393	Precipitation detector Patent	
Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress		[NASA-CASE-XLA-02619]	c10 N71-26334
[NASA-CASE-NPO-14316-1]	c33 N81-33404	Dielectric molding apparatus Patent	
MCHASTER, L. R.		[NASA-CASE-LAR-10121-1]	c15 N71-26721
Meteoroid detector		MENICHELLI, V. J.	
[NASA-CASE-LAR-10483-1]	c14 N73-32327	Optically detonated explosive device	
MCHEAR, M. F.		[NASA-CASE-NPO-11743-1]	c28 N74-27425
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements		Electroexplosive device	
[NASA-CASE-LAR-11144-1]	c25 N75-26043	[NASA-CASE-NPO-13858-1]	c28 N79-11231
MCMUTT, W. C.		MENZER, C. A.	
Dual latching solenoid valve Patent		Horn antenna having V-shaped corrugated slots	
[NASA-CASE-XMS-05890]	c09 N71-23191	[NASA-CASE-LAR-11112-1]	c32 N76-15330
MCRONALD, A. D.		MENZIES, B. T.	
Thin film gauge		Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver	
[NASA-CASE-NFO-10617-1]	c35 N74-22095	[NASA-CASE-NPO-11919-1]	c35 N74-11284
MCSAY, J. J.		Fluorescence detector for monitoring atmospheric pollutants	
Apparatus including a plurality of spaced transformers for locating short circuits in cables		[NASA-CASE-NFC-13231-1]	c45 N75-27585
[NASA-CASE-KSC-10899-1]	c33 N79-18193	Tunable injection-locked pulsed CO <sub>2</sub> laser	
MCWILLIAMS, I. G.		[NASA-CASE-NPO-14984-1]	c36 N81-15350
Compact spectroradiometer		MERHAV, S. J.	
[NASA-CASE-HQN-10683]	c14 N71-34389	Autonomous navigation system	
Two color horizon sensor		[NASA-CASE-ARC-11257-1]	c04 N81-21047
[NASA-CASE-ERC-10174]	c14 N72-25409	MERLEN, M. M.	
MEAD, D. C.		Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent	
Variable frequency oscillator with temperature compensation Patent		[NASA-CASE-XNP-06957]	c14 N71-21088
[NASA-CASE-XNP-03916]	c09 N71-28810	MERRBAUM, S.	
MEADOR, T. G., JR.		Multifunctional transducer	
Light shield and cooling apparatus		[NASA-CASE-NFC-14329-1]	c52 N81-20703
[NASA-CASE-LAR-10089-1]	c34 N74-23066	MERRICK, V. K.	
MEALI, G. E.		Stabilization of gravity oriented satellites	
Electrostatic thruster with improved insulators		Patent	
Patent		[NASA-CASE-XAC-01591]	c31 N71-17729
[NASA-CASE-XLE-01902]	c28 N71-10574	MERRILL, J. T., IV	
High voltage divider system Patent		Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot	
[NASA-CASE-XLE-02008]	c09 N71-21583	[NASA-CASE-LAR-10550-1]	c09 N74-30597
MEDCALF, W. A.		MESSINEO, S. V.	
Gas filter mounting structure		Apparatus for positioning modular components on a vertical or overhead surface	
[NASA-CASE-MSC-12297]	c14 N72-23457	[NASA-CASE-LAR-11465-1]	c37 N76-21554
MEGIE, G. J.		MESSNER, A.	
Tunable injection-locked pulsed CO <sub>2</sub> laser		System for generating timing and control signals	
[NASA-CASE-NPO-14984-1]	c36 N81-15350	[NASA-CASE-NPC-13125-1]	c33 N75-19519
MEINTEL, A. J., JR.		MESZAROS, G.	
Combined optical attitude and altitude indicating instrument Patent		Recovery of radiation damaged solar cells through thermal annealing	
[NASA-CASE-XLA-01907]	c14 N71-23268	[NASA-CASE-XGS-04047-2]	c03 N72-11062
MEISENHOLDER, G. E.		METCALFE, A. G.	
Photosensitive device to detect bearing deviation Patent		Silicide coatings for refractory metals Patent	
[NASA-CASE-XNP-00438]	c21 N70-35089	[NASA-CASE-XLE-10910]	c18 N71-29040
Roll attitude star sensor system Patent		METZGER, A. E.	
[NASA-CASE-XNP-01307]	c21 N70-41856	Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer	
MEISSINGER, H. F.		[NASA-CASE-XNP-05231]	c14 N73-28491
Method of and device for determining the			



METZLER, A. J.  
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STUART, J. L.		SUMIDA, J. T.	
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STUART, J. W.		SUMMERFIELD, D. G.	
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[NASA-CASE-GSC-10072]	c18 N71-14014	[NASA-CASE-LAR-10812-1]	c09 N74-17955
Diffuse reflective coating		SUMMERS, R. H.	
[NASA-CASE-GSC-11214-1]	c06 N73-13128	Geneva mechanism	
STUCKEY, J. M.		[NASA-CASE-NPO-13281-1]	c37 N75-13266
Panelized high performance multilayer insulation Patent		SUTLIF, J. D.	
[NASA-CASE-MFS-14023]	c33 N71-25351	Wing deployment method and apparatus Patent	
Cryogenic thermal insulation Patent		[NASA-CASE-XMS-00907]	c02 N70-41630
[NASA-CASE-XNP-05046]	c33 N71-28892	SWAIN, R. J.	
STUDENICK, D. K.		One step dual purpose joining technique	
System for stabilizing torque between a balloon and gondola		[NASA-CASE-LAR-12595-1]	c37 N80-11469
[NASA-CASE-GSC-11077-1]	c02 N73-13008	SWAIN, B. L.	
Fluid sampling device		Spherical solid-propellant rocket motor Patent	
[NASA-CASE-GSC-12143-1]	c35 N77-32456	[NASA-CASE-XLA-00105]	c28 N70-33331
STUDER, P. A.		SWANN, R. T.	
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[NASA-CASE-XGS-01451]	c09 N71-10677	[NASA-CASE-XLA-00349]	c33 N70-37979
Direct current motor with stationary armature and field Patent		Dielectric molding apparatus Patent	
[NASA-CASE-XGS-05290]	c09 N71-25999	[NASA-CASE-LAR-10121-1]	c15 N71-26721
Helical recorder arrangement for multiple channel recording on both sides of the tape		SWARTZ, P. P.	
[NASA-CASE-GSC-10614-1]	c09 N72-11224	Micro-fluid exchange coupling apparatus	
Electric motive machine including magnetic bearing		[NASA-CASE-ARC-11114-1]	c51 N81-14605
[NASA-CASE-XGS-07805]	c15 N72-33476	SWEAT, J. C.	
Magnetic bearing		Emergency escape system Patent	
[NASA-CASE-GSC-11079-1]	c37 N75-18574	[NASA-CASE-XKS-07814]	c15 N71-27067
Magnetic bearing system		SWEET, G. E.	
[NASA-CASE-GSC-11978-1]	c37 N77-17464	Compensating radiometer	
Three phase full wave dc motor decoder		[NASA-CASE-XLA-04556]	c14 N69-27484
[NASA-CASE-GSC-11824-1]	c33 N77-26386	Spherical measurement device	
Energy storage apparatus		[NASA-CASE-XLA-06683]	c14 N72-28436
[NASA-CASE-GSC-12030-1]	c44 N78-24608	SWETTE, L. L.	
Linear magnetic bearing		Electrocatalyst for oxygen reduction	
[NASA-CASE-GSC-12517-1]	c33 N81-22279	[NASA-CASE-HQN-10537-1]	c06 N72-10138
Stirling cycle cryogenic cooler		SWINGLE, R. L.	
[NASA-CASE-GSC-12697-1]	c31 N82-11312	Compact solar still Patent	
STUMP, C. W.		[NASA-CASE-XMS-04533]	c15 N71-23086
Apparatus for measuring an aircraft's speed and height		SWIRSKY, B. D.	
[NASA-CASE-LAR-12275-1]	c35 N79-18296	Method of fabricating an object with a thin wall having a precisely shaped slit	
Film advance indicator		[NASA-CASE-LAR-10409-1]	c31 N74-21059
[NASA-CASE-LAR-12474-1]	c35 N80-31774	SWORDS, B. B.	
STUMP, E. C., JR.		Adjustable force probe	
Hydroxy terminated perfluoro ethers Patent		[NASA-CASE-MFS-20760]	c14 N72-33377
[NASA-CASE-NPO-10768]	c06 N71-27254	SYDNOR, R. L.	
Perfluoro polyether acyl fluorides		Ultra stable frequency distribution system	
[NASA-CASE-NPO-10765]	c06 N72-20121	[NASA-CASE-NPO-13836-1]	c32 N78-15323
Polyurethane resins from hydroxy terminated perfluoro ethers		SYVERTSON, C. A.	
[NASA-CASE-NPO-10768-2]	c06 N72-27144	Flight craft Patent	
Highly fluorinated polyurethanes		[NASA-CASE-XAC-02058]	c02 N71-16087
[NASA-CASE-NPO-10767-2]	c06 N72-27151		
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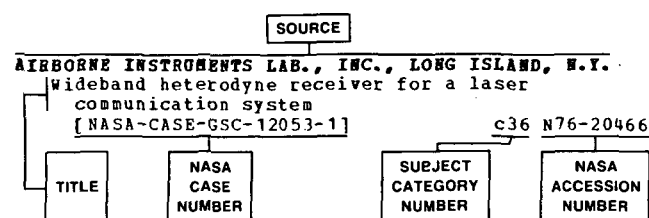
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 Counter Patent [NASA-CASE-XNP-06234] c10 N71-27137  
**COMPUTER SCIENCES CORP., FALLS CHURCH, VA.**  
 Oceanic wave measurement system [NASA-CASE-MFS-23862-1] c48 N80-18667  
**CONRAC CORP., PASADENA, CALIF.**  
 Penetrating radiation system for detecting the amount of liquid in a tank Patent [NASA-CASE-MSC-12280] c27 N71-16348  
**CONSOLIDATED CONTROLS CORP., EL SEGUNDO, CALIF.**  
 Low temperature latching solenoid [NASA-CASE-MSC-18106-1] c33 N82-11357  
**CORNELL UNIV., ITHACA, N. Y.**  
 Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent [NASA-CASE-XGS-01881] c09 N70-40123  
**CRANE CO., BURBANK, CALIF.**  
 Hydraulic transformer Patent [NASA-CASE-MFS-20830] c15 N71-30028  
**CURTISS-WRIGHT CORP., WOOD-RIDGE, N.J.**  
 Gas turbine combustion apparatus Patent [NASA-CASE-XLF-103477-1] c28 N71-20330  
**CUTLER-HAMMER, INC., MELVILLE, N.Y.**  
 Wideband heterodyne receiver for laser communication system [NASA-CASE-GSC-12053-1] c32 N77-28346

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**DELAWARE UNIV., NEWARK.**  
 High field Cds detector for infrared radiation [NASA-CASE-LAR-11027-1] c35 N74-18088



## DENVER UNIV., COLO.

Metal shearing energy absorber  
[NASA-CASE-HQN-10638-1] c15 N73-30460

DEPARTMENT OF TRANSPORTATION, CAMBRIDGE, MASS.  
Optical noise suppression device and method  
[NASA-CASE-MSC-12640-1] c74 N76-31998

DESERT RESEARCH INST., BENO, NEV.  
Improved constant-output atomizer  
[NASA-CASE-MFS-25631-1] c34 N82-10360

DORSE AND MARGOLIN, INC., BOHEMIA, N.Y.  
Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c07 N71-22984

DOUGLAS AIRCRAFT CO., INC., SANTA MONICA, CALIF.  
Recoverable single stage spacecraft booster Patent  
[NASA-CASE-XMF-01973] c31 N70-41588

Switching circuit employing regeneratively connected complementary transistors Patent  
[NASA-CASE-XNP-02654] c10 N70-42032

Split nut separation system Patent  
[NASA-CASE-XNP-06914] c15 N71-21489

Artificial gravity spin deployment system Patent  
[NASA-CASE-XNP-02595] c31 N71-21881

Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c15 N71-22721

Energy absorption device Patent  
[NASA-CASE-XNP-01848] c15 N71-28959

Collapsible pistons  
[NASA-CASE-MSC-13789-1] c11 N73-32152

DUKE UNIV., DURHAM, N. C.  
Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c33 N74-11049

DUMONT ELECTRON TUBES, CLIFTON, N. J.  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c09 N72-20206

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ECHO SCIENCE CORP., MOUNTAIN VIEW, CALIF.  
Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c33 N79-21265

EITEL-MCCULLOUGH, INC., SAN CARLOS, CALIF.  
Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c15 N71-26312

ELECTRAC, INC., ANAHEIM, CALIF.  
Optimum predetection diversity receiving system Patent  
[NASA-CASE-XGS-00740] c07 N71-23098

ELECTRIC STORAGE BATTERY CO., BALEIGH, N.C.  
Electric battery and method for operating same Patent  
[NASA-CASE-XGS-01674] c03 N71-29129

Storage battery comprising negative plates of a wedge shaped configuration  
[NASA-CASE-NPO-11806-1] c44 N74-19693

ELECTRIC STORAGE BATTERY CO., YARDLEY, PA.  
Electric storage battery  
[NASA-CASE-NPO-11021] c03 N72-20032

ELECTRO-OPTICAL SYSTEMS, INC., PASADENA, CALIF.  
Focussing system for an ion source having apertured electrodes Patent  
[NASA-CASE-XNP-03332] c09 N71-10618

Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
[NASA-CASE-XLE-04526] c03 N71-11052

Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c17 N71-15468

Soil particles separator, collector and viewer Patent  
[NASA-CASE-XNP-09770] c15 N71-20440

Particle detection apparatus including a ballistic pendulum Patent  
[NASA-CASE-XMS-04201] c14 N71-22990

Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c10 N71-23271

Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c28 N71-23293

Material handling device Patent  
[NASA-CASE-XNP-09770-3] c11 N71-27036

Screen particle separator  
[NASA-CASE-XNP-09770-2] c15 N72-22483

ELECTRONIC IMAGE SYSTEMS CORP., CAMBRIDGE, MASS.  
Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c14 N73-28489

ESSEX CORP., ALEXANDRIA, VA.  
Satellite retrieval system

[NASA-CASE-MFS-25403-1] c18 N81-24164

EBEN KNIGHT CORP., EAST HATICK, MASS.  
Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c14 N71-26774

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FAIRCHILD HILLER CORP., GERHANTOWN, MD.  
Two axis fluxgate magnetometer Patent  
[NASA-CASE-GSC-10441-1] c14 N71-27325

Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c14 N71-30026

Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c31 N73-30829

FARADAY LABS., INC., LA JOLLA, CALIF.  
Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c26 N77-29260

FEDERAL-MOGUL CORP., LOS ALAMITOS, CALIF.  
Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XMF-07659] c06 N71-22975

FLORIDA UNIV., GAINESVILLE.  
Safety flywheel  
[NASA-CASE-HQN-10888-1] c44 N79-14527

FMC CORP., NEW YORK.  
Decomposition unit Patent  
[NASA-CASE-XMS-00583] c28 N70-38504

FOOTHILL COLLEGE, LOS ALTOS HILLS, CALIF.  
Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c33 N76-19339

FORD MOTOR CO., DEARBORN, MICH.  
Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c14 N71-30265

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GARRETT CORP., LOS ANGELES, CALIF.  
Relief valve  
[NASA-CASE-XMS-05894-1] c15 N69-21924

Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c05 N71-11203

Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c09 N71-23191

Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MSC-10960-1] c03 N71-24718

Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c32 N72-25877

Process for separation of dissolved hydrogen from water by use of palladium and process for coating palladium with palladium black  
[NASA-CASE-MSC-13335-1] c06 N72-31140

Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c54 N74-32546

Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c35 N78-10428

Wind tunnel  
[NASA-CASE-LAR-10135-1] c09 N79-21083

Water separator  
[NASA-CASE-XMS-01295-1] c37 N79-21345

Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c33 N81-27402

GARRETT CORP., TORRANCE, CALIF.  
Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c33 N81-31481

GCA CORP., BEDFORD, MASS.  
Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c06 N71-13461

GENERAL DYNAMICS/ASTRONAUTICS, SAN DIEGO, CALIF.  
Determination of spot weld quality Patent  
[NASA-CASE-XNP-02588] c15 N71-18613

Pressure transducer calibrator Patent  
[NASA-CASE-XNP-01660] c14 N71-23036

Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c17 N71-24830

GENERAL DYNAMICS/CONVAIR, SAN DIEGO, CALIF.  
Signal generator  
[NASA-CASE-XNP-05612] c09 N69-21468

Separation nut Patent  
[NASA-CASE-XGS-01971] c15 N71-15922

Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c15 N71-15968

Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c25 N74-12813

Heat exchanger  
[NASA-CASE-MFS-22991-1] c34 N77-10463

**GENERAL DYNAMICS CORP., SAN DIEGO, CALIF.**  
Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c14 N69-24331

Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c05 N71-26293

Driving lamps by induction  
[NASA-CASE-MFS-21214-1] c09 N73-30181

**GENERAL ELECTRIC CO., CINCINNATI, OHIO.**  
Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c07 N77-14025

Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c07 N77-17059

Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c24 N77-19170

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c07 N77-23106

Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c07 N77-27116

Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c07 N77-32148

Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c37 N77-32500

Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c37 N77-32501

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c37 N78-10467

Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c37 N78-10468

Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c07 N78-17055

Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c07 N78-17056

Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c37 N78-17384

Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089

Redundant disc  
[NASA-CASE-LEW-12496-1] c07 N78-33101

Fuel delivery system including heat exchanger means  
[NASA-CASE-LEW-12793-1] c37 N79-11403

Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c07 N79-14096

Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c07 N79-14097

Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c71 N79-14871

Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c07 N80-18039

Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c07 N81-14999

Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c07 N81-19115

Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c07 N81-19116

**GENERAL ELECTRIC CO., CLEVELAND, OHIO.**  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067

**GENERAL ELECTRIC CO., PHILADELPHIA, PA.**  
Catalyst for growth of boron carbide single crystal whiskers  
[NASA-CASE-XHQ-03903] c15 N69-21922

Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c03 N71-10608

Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c15 N71-20739

Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
[NASA-CASE-MSC-13917-1] c05 N72-15098

Method for measuring cutaneous sensory perception  
[NASA-CASE-MSC-13609-1] c05 N72-25122

Reaction tester  
[NASA-CASE-MSC-13604-1] c05 N73-13114

Air conditioned suit  
[NASA-CASE-LAR-10076-1] c05 N73-20137

Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MFS-21441-1] c14 N73-30392

Inverter ratio failure detector  
[NASA-CASE-NFO-13160-1] c35 N74-18090

Electrophoretic sample insertion  
[NASA-CASE-MFS-21395-1] c25 N74-26948

Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c34 N74-27744

Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c54 N75-27759

Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c54 N76-14804

Solar cell module  
[NASA-CASE-NFO-14467-1] c44 N79-31753

Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c33 N80-18286

**GENERAL ELECTRIC CO., PLEASANTON, CALIF.**  
Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c18 N71-28729

**GENERAL ELECTRIC CO., SCENECTADY, N. Y.**  
Superconductive accelerometer Patent  
[NASA-CASE-XMF-01099] c14 N71-15969

Remote manipulator system  
[NASA-CASE-MFS-22022-1] c37 N76-15460

Automatic transponder  
[NASA-CASE-GSC-12075-1] c32 N77-31350

Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c26 N77-32279

**GENERAL ELECTRIC CO., UTICA, N. Y.**  
Method of determining bond quality of power transistors attached to substrates  
[NASA-CASE-MFS-21931-1] c37 N75-26372

**GENERAL MOTORS CORP., DETROIT, MICH.**  
Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c15 N71-26243

**GENERAL MOTORS CORP., MILWAUKEE, WIS.**  
Adjustable tension wire guide Patent  
[NASA-CASE-XMS-02383] c15 N71-15918

**GENERAL MOTORS CORP., SANTA BARBARA, CALIF.**  
Resilient wheel Patent  
[NASA-CASE-MFS-13929] c15 N71-27091

**GENERAL PRECISION, INC., LITTLE FALLS, N.J.**  
Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c10 N71-18724

**GENERAL PRECISION, INC., SUNNYVALE, CALIF.**  
Broadband video process with very high input impedance  
[NASA-CASE-NFO-10199] c09 N72-17156

**GENERAL PRECISION SYSTEMS, INC., LITTLE FALLS, N.J.**  
Fluidic-thermochromic display device Patent  
[NASA-CASE-ERC-10031] c12 N71-18603

**GENERAL TECHNOLOGIES CORP., RESTON, VA.**  
Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c24 N77-19171

**GEOPHYSICS CORP. OF AMERICA, BEDFORD, MASS.**  
Inflation system for balloon type satellites Patent  
[NASA-CASE-XGS-03351] c31 N71-16081

Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c35 N79-33450

**GEOPHYSICS CORP. OF AMERICA, BOSTON, MASS.**  
Ionospheric battery Patent  
[NASA-CASE-XGS-01593] c03 N70-35408

**GEORGE WASHINGTON UNIV., WASHINGTON, D.C.**  
Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c14 N73-13435

Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c52 N74-27566

**GIANNINI SCIENTIFIC CORP., SANTA ANA, CALIF.**  
Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c33 N75-29318

Combination automatic-starting electrical plasma torch and gas shutoff valve  
[NASA-CASE-XLE-10717] c37 N75-29426

**GINER, INC., WALTHAM, MASS.**  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c33 N80-20487

Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LFW-13148-2] c44 N81-29524  
**GLOBE-UNION, INC., MILWAUKEE, WIS.**  
Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c03 N72-24037  
**GOODYEAR AEROSPACE CORP., AKRON, OHIO.**  
Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c03 N70-41580  
Method of making a filament-wound container Patent  
[NASA-CASE-XLE-03803-2] c15 N71-17651  
Filament wound container Patent  
[NASA-CASE-XLE-03803] c15 N71-23816  
Panelized high performance multilayer insulation Patent  
[NASA-CASE-MFS-14023] c33 N71-25351  
Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c18 N71-26155  
Compression test assembly  
[NASA-CASE-LAR-10440-1] c14 N73-32323  
Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c37 N76-22540  
**GRACE (W. B.) AND CO., CLARKSVILLE, MD.**  
Metal containing polymers from cyclic tetrameric phenylphosphonitrilamides Patent  
[NASA-CASE-HCN-10364] c06 N71-27363  
**GRUMMAN AIRCRAFT ENGINEERING CORP., BETHPAGE, N. Y.**  
Sealed cabinetry Patent  
[NASA-CASE-MSC-12168-1] c09 N71-18600  
Out of tolerance warning alarm system for plurality of monitored circuits Patent  
[NASA-CASE-XMS-10984-1] c10 N71-19417  
**GULF GENERAL ATOMIC, SAN DIEGO, CALIF.**  
Wavetorm simulator Patent  
[NASA-CASE-NPO-10251] c10 N71-27365  
**GULTON INDUSTRIES, INC., ALBUQUERQUE, N.MEX.**  
Analog-to-digital converter  
[NASA-CASE-MSC-13110-1] c08 N72-22163

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**HAMILTON STANDARD, WINDSOR LOCKS, CONN.**  
Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c05 N71-26333  
Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c54 N77-32722  
Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c28 N81-24280  
**HAMILTON STANDARD DIV., UNITED AIRCRAFT CORP., WINDSOR LOCKS, CONN.**  
Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c77 N75-20139  
**HARRIS CORP., MELBOURNE, FLA.**  
Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c33 N81-26358  
Telescoping columns  
[NASA-CASE-LAR-12195-1] c31 N81-27324  
**HAYES INTERNATIONAL CORP., BIRMINGHAM, ALA.**  
Space craft soft landing system Patent  
[NASA-CASE-XMF-02108] c31 N70-36845  
Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XMP-06522] c15 N71-19486  
**HAYES INTERNATIONAL CORP., HUNTSVILLE, ALA.**  
Method and apparatus for cryogenic wire stripping Patent  
[NASA-CASE-MFS-10340] c15 N71-17628  
Self-balancing strain gage transducer Patent  
[NASA-CASE-MFS-12827] c14 N71-17656  
Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c07 N71-19433  
**HAZLETON LABS., FALLS CHURCH, VA.**  
Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c04 N69-27487  
Light detection instrument Patent  
[NASA-CASE-XGS-05534] c23 N71-16355  
Lyophilized reaction mixtures Patent  
[NASA-CASE-XGS-05532] c06 N71-17705  
Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c15 N72-21465  
**HERCULES, INC., WILMINGTON, DEL.**  
Method of repairing discontinuity in fiberglass

structures  
[NASA-CASE-LAR-10416-1] c24 N74-30001  
**HOFFMAN ELECTRONICS CORP., EL MONTE, CALIF.**  
Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c03 N69-24267  
**HONEYWELL, INC., HOPKINS, MINN.**  
Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c10 N71-19418  
**HONEYWELL, INC., MINNEAPOLIS, MINN.**  
Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39987  
Apparatus for overcurrent protection of a push-pull amplifier Patent  
[NASA-CASE-MSC-12033-1] c09 N71-13531  
Static inverter Patent  
[NASA-CASE-XGS-05289] c09 N71-19470  
High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08589-1] c09 N71-20569  
Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c15 N71-20813  
Piezoelectric pump Patent  
[NASA-CASE-XNP-05429] c26 N71-21824  
Controllers Patent  
[NASA-CASE-XMS-07487] c15 N71-23255  
Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c15 N71-23811  
Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c10 N71-27366  
Voice operated controller Patent  
[NASA-CASE-XLA-04063] c31 N71-33160  
Load current sensor for a series pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c09 N72-25249  
Radiant source tracker independent of nonconstant irradiance  
[NASA-CASE-NPO-11686] c14 N73-25462  
Optical instruments  
[NASA-CASE-MSC-14096-1] c74 N74-15095  
Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c37 N77-23482  
**HONEYWELL, INC., ST. PETERSBURG, FLA.**  
Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c60 N80-30050  
**HOUSTON UNIV., TEX.**  
Analysis of volatile organic compounds  
[NASA-CASE-MSC-14428-1] c23 N77-17161  
**HOWARD UNIV., WASHINGTON, D. C.**  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c54 N76-22914  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c52 N81-25661  
**HUGHES AIRCRAFT CO., CULVER CITY, CALIF.**  
Varactor high level mixer  
[NASA-CASE-XGS-02171] c09 N69-24324  
Thermally operated valve Patent  
[NASA-CASE-XLE-00815] c15 N70-35407  
Thrust dynamometer Patent  
[NASA-CASE-XLE-00702] c14 N70-40203  
Solid state chemical source for ammonia beam maser Patent  
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Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c21 N71-10771  
Horn feed having overlapping apertures Patent  
[NASA-CASE-GSC-10452] c07 N71-12396  
Deflective rod switch with elastic support and sealing means Patent  
[NASA-CASE-XNP-09808] c09 N71-12518  
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[NASA-CASE-XNP-09572] c14 N71-15621  
Method of making screen by casting Patent  
[NASA-CASE-XLE-00953] c15 N71-15966  
Fluid flow control valve Patent  
[NASA-CASE-XLE-00703] c15 N71-15967  
Low noise single aperture multimode monopulse antenna feed system Patent  
[NASA-CASE-XNP-01735] c07 N71-22750  
Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c17 N71-23046  
Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c28 N71-23081

Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c18 N71-23088

Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c18 N71-24184

Triaxial antenna Patent  
[NASA-CASE-XGS-02290] c07 N71-28809

Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c09 N71-28810

High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01954] c28 N71-28850

Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent  
[NASA-CASE-HQN-00936] c31 N71-29050

Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c17 N71-29137

Ion thruster  
[NASA-CASE-LEW-10770-1] c28 N72-22770

Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c27 N75-27160

**HUGHES AIRCRAFT CO., LOS ANGELES, CALIF.**

Power control circuit  
[NASA-CASE-XNP-02713] c10 N69-39888

Thermal switch Patent  
[NASA-CASE-XNP-00463] c33 N70-36847

Double optic system for ion engine Patent  
[NASA-CASE-XNP-02839] c28 N70-41922

Sample collecting impact bit Patent  
[NASA-CASE-XNP-01412] c15 N70-42034

Bootstrap unloader Patent  
[NASA-CASE-XNP-05768] c09 N71-12516

Difference circuit Patent  
[NASA-CASE-XNP-08274] c10 N71-13537

Gas regulator Patent  
[NASA-CASE-NPO-10298] c12 N71-17661

A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNP-09450] c10 N71-18723

Phase demodulation system with two phase locked loops Patent  
[NASA-CASE-XNP-00777] c10 N71-15469

High voltage transistor circuit Patent  
[NASA-CASE-NPO-06937] c09 N71-19516

Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c08 N71-19687

System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c24 N71-20518

Broadband frequency discriminator Patent  
[NASA-CASE-NPO-10096] c07 N71-24583

Flexible, repairable, portable material for electrical connectors Patent  
[NASA-CASE-XGS-05180] c18 N71-25881

Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c10 N71-26142

Narrow bandwidth video Patent  
[NASA-CASE-XMS-06740-1] c07 N71-26579

Solar panel fabrication Patent  
[NASA-CASE-XNP-03413] c03 N71-26726

Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c17 N71-26773

Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c07 N72-11148

Conical reflector antenna  
[NASA-CASE-NPO-10303] c07 N72-22127

Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c15 N73-27406

High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c32 N74-20863

Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c37 N74-21058

Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c74 N74-21304

Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942

Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366

Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c33 N78-32340

System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c32 N79-20296

Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c32 N81-15179

Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c32 N81-27341

**HUGHES RESEARCH LABS., MALIBU, CALIF.**

Thrust dynamometer Patent  
[NASA-CASE-XLE-05260] c14 N71-20429

**ITT RESEARCH INST., CHICAGO, ILL.**

Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c15 N71-15871

Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c18 N71-16124

Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-07770-2] c18 N71-26772

Synthesis of zinc titanate pigment and coatings containing the same  
[NASA-CASE-MFS-13532] c18 N72-17532

Junction range finder  
[NASA-CASE-KSC-10108] c14 N73-25461

Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c27 N77-30237

**IMAGE INFORMATION, INC., DANBURY, CONN.**

Recorder/processor apparatus  
[NASA-CASE-GSC-11553-1] c35 N74-15831

**INCA ENGINEERING CORP., SAN GABRIEL, CALIF.**

Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c34 N74-27730

**INSTITUTE FOR RESEARCH, INC., HOUSTON, TEX.**

Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c05 N72-25120

**INSTITUTE OF RESEARCH AND INSTRUMENTATION, HOUSTON, TEX.**

Pressed disc type sensing electrodes with ion-screening means Patent  
[NASA-CASE-XMS-04212-1] c05 N71-12346

**INTERNATIONAL BUSINESS MACHINES CORP., HOPEWELL JUNCTION, N. Y.**

Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c76 N79-23798

**INTERNATIONAL BUSINESS MACHINES CORP., NEW YORK.**

Electrical connector pin with wiping action  
[NASA-CASE-XMF-04238] c09 N69-39734

Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c15 N71-10809

Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c10 N71-29135

**INTERNATIONAL BUSINESS MACHINES CORP., Poughkeepsie, N.Y.**

Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c76 N80-32245

**INTERNATIONAL HARVESTER CO., SAN DIEGO, CALIF.**

Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c18 N71-29040

**INTERNATIONAL LASER SYSTEMS, INC., ORLANDO, FLA.**

Active lamp pulse driver circuit  
[NASA-CASE-GSC-12566-1] c36 N82-10390

**INTERNATIONAL LATEX CORP., DOVER, DEL.**

Space suit  
[NASA-CASE-MSC-12609-1] c05 N73-32012

**ISONET CORP., PALISADES PARK, N.J.**

Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c52 N79-21750

**ITT CORP., NUTLEY, N.J.**

Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c07 N71-19773

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[NASA-CASE-XGS-08679] c10 N71-21473

Satellite interlace synchronization system  
[NASA-CASE-GSC-10390-1] c07 N72-11149

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System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c06 N82-16075

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Pressure variable capacitor  
[NASA-CASE-XNP-09752] c14 N69-21541

Rock drill for recovering samples  
[NASA-CASE-XNP-07478] c14 N69-21923

Data compression system  
[NASA-CASE-XNP-09785] c08 N69-21928

Magnetohydrodynamic induction machine  
[NASA-CASE-XNP-07481] c25 N69-21929

Electromechanical actuator  
[NASA-CASE-XNP-05675] c15 N69-23185

Refrigeration apparatus  
[NASA-CASE-NPO-10309] c15 N69-23190

Direct radiation cooling of the collector of linear beam tubes  
[NASA-CASE-XNP-09227] c15 N69-24319

Excitation and detection circuitry for a flux responsive magnetic head  
[NASA-CASE-XNP-04183] c09 N69-24329

Telemetry word forming unit  
[NASA-CASE-XNP-09225] c09 N69-24333

Solid state switch  
[NASA-CASE-XNP-09228] c09 N69-27500

Belleville spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c15 N69-27504

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[NASA-CASE-XNP-04180] c07 N69-39736

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Binetallic power controlled actuator  
[NASA-CASE-XNP-05776] c09 N69-39929

Piping arrangement through a double chamber structure  
[NASA-CASE-XNP-08882] c15 N69-39935

Micropacked column for a chromatographic system  
[NASA-CASE-XNP-04816] c06 N69-39936

Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c14 N69-39937

Thermionic tantalum emitter doped with oxygen  
Patent Application  
[NASA-CASE-NPO-11138] c03 N70-34646

Data handling system based on source significance, storage availability and data received from the source Patent Application  
[NASA-CASE-XNP-04162-1] c08 N70-34675

Electro-optical scanning apparatus Patent Application  
[NASA-CASE-NPO-11106] c14 N70-34697

Liquid junction and method of fabricating the same Patent Application  
[NASA-CASE-NPO-10682] c15 N70-34699

Helium refining by superfluidity Patent  
[NASA-CASE-XNP-00733] c06 N70-34946

Means and methods of depositing thin films on substrates Patent  
[NASA-CASE-XNP-00595] c15 N70-34967

Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c21 N70-35089

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[NASA-CASE-XNP-00611] c09 N70-35219

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[NASA-CASE-XNP-00449] c14 N70-35220

Parabolic reflector horn feed with spillover correction Patent  
[NASA-CASE-XNP-00540] c09 N70-35382

Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c14 N70-35394

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[NASA-CASE-XNP-00465] c21 N70-35395

Binary to binary-coded-decimal converter Patent  
[NASA-CASE-XNP-00432] c08 N70-35423

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[NASA-CASE-XNP-00683] c09 N70-35425

Ionization vacuum gauge Patent  
[NASA-CASE-XNP-00646] c14 N70-35666

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[NASA-CASE-XNP-00614] c14 N70-36907

High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c15 N70-36908

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[NASA-CASE-XNP-00748] c07 N70-36911

Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c21 N70-36938

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[NASA-CASE-XNP-00416] c15 N70-36947

Apparatus and method for control of a solid fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c28 N70-38181

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[NASA-CASE-XNP-00612] c11 N70-38182

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[NASA-CASE-XNP-00738] c09 N70-38201

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[NASA-CASE-XNP-00425] c11 N70-38202

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[NASA-CASE-XNP-00840] c15 N70-38225

Ignition system for monopropellant combustion devices Patent  
[NASA-CASE-XNP-00249] c28 N70-38249

Pressure regulating system Patent  
[NASA-CASE-XNP-00450] c15 N70-38603

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[NASA-CASE-XNP-00476] c15 N70-38620

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[NASA-CASE-XNP-00234] c28 N70-38645

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[NASA-CASE-XNP-01104] c28 N70-39931

Electrically-operated rotary shutter Patent  
[NASA-CASE-XNP-00637] c14 N70-40273

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[NASA-CASE-XNP-01390] c28 N70-41275

Parallel motion suspension device Patent  
[NASA-CASE-XNP-01567] c15 N70-41310

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Reinforcing means for diaphragms Patent  
[NASA-CASE-XNP-01962] c32 N70-41370

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[NASA-CASE-XNP-01472] c14 N70-41807

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[NASA-CASE-XNP-01307] c21 N70-41856

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[NASA-CASE-XNP-01749] c27 N70-41897

Solenoid construction Patent  
[NASA-CASE-XNP-01951] c09 N70-41929

Closed loop ranging system Patent  
[NASA-CASE-XNP-01501] c21 N70-41930

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[NASA-CASE-XNP-05082] c15 N70-41960

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Baseline stabilization system for ionization detector Patent  
[NASA-CASE-XNP-03128] c10 N70-41991

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[NASA-CASE-XNP-01383] c09 N71-10659

Dual waveguide mode source having control means for adjusting the relative amplitude of two modes Patent  
[NASA-CASE-XNP-03134] c07 N71-10676

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[NASA-CASE-XNP-01464] c03 N71-10728

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[NASA-CASE-NPO-10337] c14 N71-15604

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[NASA-CASE-XNP-03459-2] c18 N71-15688

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[NASA-CASE-XNP-00920] c15 N71-15906

Dual mode horn antenna Patent  
[NASA-CASE-XNP-01057] c07 N71-15907

Means for controlling rupture of shock tube diaphragms Patent  
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Polarimeter for transient measurement Patent  
[NASA-CASE-XNP-08883] c23 N71-16101

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[NASA-CASE-NPO-10138] c33 N71-16357

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[NASA-CASE-XNP-08840] c23 N71-16365

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[NASA-CASE-XNP-08897] c15 N71-17694

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Automatic fault correction system for parallel signal channels Patent  
[NASA-CASE-XNP-03263] c09 N71-18843

Data compression processor Patent  
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[NASA-CASE-XNP-09453] c08 N71-19420

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Electrical switching device Patent  
[NASA-CASE-NPO-10037] c09 N71-19610

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[NASA-CASE-XNP-09770] c15 N71-20440

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[NASA-CASE-XNP-03744] c10 N71-20448

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[NASA-CASE-XNP-09763] c14 N71-20461

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[NASA-CASE-XNP-02983] c14 N71-21091

Holder for crystal resonators Patent  
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[NASA-CASE-XNP-00746] c07 N71-21476

Split nut separation system Patent  
[NASA-CASE-XNP-06914] c15 N71-21489

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[NASA-CASE-XNP-01059] c23 N71-21821

Electron bombardment ion engine Patent		Fluid containers and resealable septum therefor Patent	
[NASA-CASE-XNP-04124]	c28 N71-21822	[NASA-CASE-NPO-10123]	c15 N71-24835
Data compressor Patent		Temperature telemetric transmitter Patent	
[NASA-CASE-XNP-04067]	c08 N71-22707	[NASA-CASE-NPO-10649]	c07 N71-24840
Error correcting method and apparatus Patent		Tuning arrangement for an electron discharge device or the like Patent	
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Counter and shift register Patent		Noise limiter Patent	
[NASA-CASE-XNP-01753]	c08 N71-22897	[NASA-CASE-NPO-10169]	c10 N71-24844
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[NASA-CASE-XNP-08680]	c14 N71-22995	[NASA-CASE-XNP-09759]	c08 N71-24891
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[NASA-CASE-XNP-01641]	c15 N71-22997	[NASA-CASE-NPO-10716]	c09 N71-24892
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[NASA-CASE-XNP-01747]	c15 N71-23024	[NASA-CASE-NPO-10141]	c11 N71-24964
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[NASA-CASE-XNP-02791]	c07 N71-23026	[NASA-CASE-NPO-10595]	c10 N71-25917
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Drive circuit utilizing two cores Patent		Current steering switch Patent	
[NASA-CASE-XNP-01318]	c10 N71-23033	[NASA-CASE-XNP-08567]	c09 N71-26000
Solar vane actuator Patent		Dual polarity full wave dc motor drive Patent	
[NASA-CASE-XNP-05535]	c14 N71-23040	[NASA-CASE-XNP-07477]	c09 N71-26092
Time of flight mass spectrometer with feedback means from the detector to the low source and a specific counter Patent		High impact antenna Patent	
[NASA-CASE-XNP-01056]	c14 N71-23041	[NASA-CASE-NPO-10231]	c07 N71-26101
Connector internal force gauge Patent		Video communication system and apparatus Patent	
[NASA-CASE-XNP-03918]	c14 N71-23087	[NASA-CASE-XNP-06611]	c07 N71-26102
Circulator having quarter wavelength resonant post and parametric amplifier circuits utilizing the same Patent		Parallel generation of the check bits of a PN sequence Patent	
[NASA-CASE-XNP-02140]	c09 N71-23097	[NASA-CASE-XNP-04623]	c10 N71-26103
Method of resolving clock synchronization error and means therefor Patent		Phase multiplying electronic scanning system Patent	
[NASA-CASE-XNP-08875]	c10 N71-23099	[NASA-CASE-NPO-10302]	c10 N71-26142
Impact testing machine Patent		Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent	
[NASA-CASE-XNP-04817]	c14 N71-23225	[NASA-CASE-NPO-10625]	c09 N71-26182
Zeta potential flowmeter Patent		Fluid phase analyzer Patent	
[NASA-CASE-XNP-06509]	c14 N71-23226	[NASA-CASE-NPO-10691]	c14 N71-26199
Comparator for the comparison of two binary numbers Patent		Variable frequency nuclear magnetic resonance spectrometer Patent	
[NASA-CASE-XNP-04819]	c08 N71-23295	[NASA-CASE-XNP-09830]	c14 N71-26266
Decontamination of petroleum products Patent		Time synchronization system utilizing moon reflected coded signals Patent	
[NASA-CASE-XNP-03835]	c06 N71-23499	[NASA-CASE-NPO-10143]	c10 N71-26326
Dicyanoacetylene polymers Patent		Broadband stable power multiplier Patent	
[NASA-CASE-XNP-03250]	c06 N71-23500	[NASA-CASE-XNP-10854]	c10 N71-26331
Indexing microwave switch Patent		Cascaded complementary pair broadband transistor amplifiers Patent	
[NASA-CASE-XNP-06507]	c09 N71-23548	[NASA-CASE-NPO-10003]	c10 N71-26415
Millimeter wave radiometer for radio astronomy Patent		Digital memory in which the driving of each word location is controlled by a switch core Patent	
[NASA-CASE-XNP-05832]	c30 N71-23723	[NASA-CASE-XNP-01466]	c10 N71-26434
Radiant energy intensity measurement system Patent		Conically shaped cavity radiometer with a dual purpose cone winding Patent	
[NASA-CASE-XNP-06510]	c14 N71-23797	[NASA-CASE-XNP-09701]	c14 N71-26475
High speed phase detector Patent		Analog signal integration and reconstruction system Patent	
[NASA-CASE-XNP-01306-2]	c09 N71-24596	[NASA-CASE-NPO-10344]	c10 N71-26544
Apparatus for testing polymeric materials Patent		Rapid sync acquisition system Patent	
[NASA-CASE-XNP-09699]	c06 N71-24607	[NASA-CASE-NPO-10214]	c10 N71-26577
Digital synchronizer Patent		Cryogenic cooling system Patent	
[NASA-CASE-NPO-10851]	c07 N71-24613	[NASA-CASE-NPO-10467]	c23 N71-26654
Signal processing apparatus for multiplex transmission Patent		Vacuum evaporator with electromagnetic ion steering Patent	
[NASA-CASE-NPO-10388]	c07 N71-24622	[NASA-CASE-NPO-10331]	c09 N71-26701
Self-testing and repairing computer Patent		Automated fluid chemical analyzer Patent	
[NASA-CASE-NPO-10567]	c08 N71-24633	[NASA-CASE-XNP-09451]	c06 N71-26754
Serial digital decoder Patent		Material handling device Patent	
[NASA-CASE-NPO-10150]	c08 N71-24650	[NASA-CASE-XNP-09770-3]	c11 N71-27036
Detenting servomotor Patent		Pressure seal Patent	
[NASA-CASE-XNP-06936]	c15 N71-24695	[NASA-CASE-NPO-10796]	c15 N71-27068
Reversible motion drive system Patent		Multiducted electromagnetic pump Patent	
[NASA-CASE-NPO-10173]	c15 N71-24696	[NASA-CASE-NPO-10755]	c15 N71-27084
Decoder system Patent		Peak acceleration limiter for vibrational tester Patent	
[NASA-CASE-NPO-10118]	c07 N71-24741	[NASA-CASE-NPO-10556]	c14 N71-27185
Television signal processing system Patent		Thin film capacitive bolometer and temperature sensor Patent	
[NASA-CASE-NPO-10140]	c07 N71-24742	[NASA-CASE-NPO-10607]	c09 N71-27232
Switching circuit Patent		Black body cavity radiometer Patent	
[NASA-CASE-XNP-06505]	c10 N71-24799	[NASA-CASE-NPO-10810]	c14 N71-27323
Magnetic power switch Patent			
[NASA-CASE-NPO-10242]	c09 N71-24803		
Remodulator filter Patent			
[NASA-CASE-NPO-10198]	c09 N71-24806		
Broadband microwave waveguide window Patent			
[NASA-CASE-XNP-08880]	c09 N71-24808		
Cavity radiometer Patent			
[NASA-CASE-XNP-08961]	c14 N71-24809		
High-gain, broadband traveling wave maser Patent			
[NASA-CASE-NPO-10548]	c16 N71-24831		



Video signal enhancement system with dynamic range compression and modulation index expansion Patent  
[NASA-CASE-NPO-10343] c07 N71-27341

Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c15 N71-27432

Cavity emitter for thermionic converter Patent  
[NASA-CASE-NPO-10412] c09 N71-28421

Frictionless universal joint Patent  
[NASA-CASE-NPO-10646] c15 N71-28467

Epoxy-aziridine polymer product Patent  
[NASA-CASE-NPO-10701] c06 N71-28620

Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-NXP-08881] c17 N71-28747

Wind tunnel microphone structure Patent  
[NASA-CASE-NXP-00250] c11 N71-28779

Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-NXP-04023] c06 N71-28808

Digital memory sense amplifying means Patent  
[NASA-CASE-NXP-01012] c08 N71-28925

Digital filter for reducing sampling jitter in digital control systems Patent  
[NASA-CASE-NPO-11088] c08 N71-29034

Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c23 N71-29125

Rotable accurate reflector system for telescopes Patent  
[NASA-CASE-NPO-10468] c23 N71-33229

Encoder/decoder system for a rapidly synchronizable binary code Patent  
[NASA-CASE-NPO-10342] c10 N71-33407

High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c07 N71-33606

A dc servosystem including an ac motor Patent  
[NASA-CASE-NPO-10700] c07 N71-33613

Solar cell matrix  
[NASA-CASE-NPO-11190] c03 N71-34044

Manually actuated heat pump  
[NASA-CASE-NPO-10677] c05 N72-11084

Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c07 N72-11148

System for controlling the operation of a variable signal device  
[NASA-CASE-NPO-11064] c07 N72-11150

Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c08 N72-11171

Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test  
[NASA-CASE-NPO-10778] c14 N72-11364

Vibration isolation system using compression springs  
[NASA-CASE-NPO-11012] c15 N72-11391

Feed system for an ion thruster  
[NASA-CASE-NPO-10737] c28 N72-11709

Thermostatic actuator  
[NASA-CASE-NPO-10637] c15 N72-12409

High voltage transistor amplifier with constant current load  
[NASA-CASE-NPO-11023] c09 N72-17155

Reference voltage switching unit  
[NASA-CASE-NPO-11253] c09 N72-17157

Valving device for automatic refilling in cryogenic liquid systems  
[NASA-CASE-NPO-11177] c15 N72-17453

Expandable support means  
[NASA-CASE-NPO-11059] c15 N72-17454

Breakaway connector  
[NASA-CASE-NPO-11140] c15 N72-17455

Modular encoder  
[NASA-CASE-NPO-10629] c08 N72-18184

Transition tracking bit synchronization system  
[NASA-CASE-NPO-10844] c07 N72-20140

Data compression system  
[NASA-CASE-NPO-11243] c07 N72-20154

Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c08 N72-20176

Method and apparatus for high resolution spectral analysis  
[NASA-CASE-NPO-10748] c08 N72-20177

Flow rate switch  
[NASA-CASE-NPO-10722] c09 N72-20199

Electrical connector  
[NASA-CASE-NPO-10694] c09 N72-20200

Wide band doubler and sine wave quadrature generator  
[NASA-CASE-NPO-11133] c10 N72-20223

Signal phase estimator  
[NASA-CASE-NPO-11203] c10 N72-20224

Optimal control system for an electric motor driven vehicle  
[NASA-CASE-NPO-11210] c11 N72-20244

Impact energy absorbing system utilizing fracturable material  
[NASA-CASE-NPO-10671] c15 N72-20443

Torsional disconnect unit  
[NASA-CASE-NPO-10704] c15 N72-20445

Solid propellant rocket motor  
[NASA-CASE-NXP-03282] c28 N72-20758

Shell side liquid metal boiler  
[NASA-CASE-NPO-10831] c33 N72-20915

Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c07 N72-21118

Current steering commutator  
[NASA-CASE-NPO-10743] c08 N72-21199

Automated equipotential plotter  
[NASA-CASE-NPC-11134] c09 N72-21246

Pressure transducer  
[NASA-CASE-NPC-10832] c14 N72-21405

Positioning mechanism  
[NASA-CASE-NPO-10679] c15 N72-21462

Solid state matrices  
[NASA-CASE-NPO-10591] c03 N72-22041

Solar cell panels with light transmitting plate  
[NASA-CASE-NPC-10747] c03 N72-22042

Data multiplexer using tree switching configuration  
[NASA-CASE-NPO-11333] c08 N72-22162

System for quantizing graphic displays  
[NASA-CASE-NPC-10745] c08 N72-22164

Digital function generator  
[NASA-CASE-NPO-11104] c08 N72-22165

Analog-to-digital converter analyzing system  
[NASA-CASE-NPO-10560] c08 N72-22166

Feedback shift register with states decomposed into cycles of equal length  
[NASA-CASE-NPO-11082] c08 N72-22167

Self-obturbating, gas operated launcher  
[NASA-CASE-NPO-11013] c11 N72-22247

Optical binocular scanning apparatus  
[NASA-CASE-NPO-11002] c14 N72-22441

Ionene membrane separator  
[NASA-CASE-NPO-11091] c18 N72-22567

Deployable solar cell array  
[NASA-CASE-NPO-10883] c31 N72-22874

Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
[NASA-CASE-NPO-11388] c03 N72-23048

Optical frequency waveguide and transmission system  
[NASA-CASE-HCN-10541-3] c23 N72-23695

Bipropellant injector  
[NASA-CASE-NXP-09461] c28 N72-23809

Solid propellant rocket motor nozzle  
[NASA-CASE-NPO-11458] c28 N72-23810

Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c06 N72-25146

Flexible computer accessed telemetry  
[NASA-CASE-NPO-11358] c07 N72-25172

Multi-purpose antenna employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c07 N72-25174

Communications link for computers  
[NASA-CASE-NPC-11161] c08 N72-25207

Method and apparatus for frequency-division multiplex communications by digital phase shift of carrier  
[NASA-CASE-NPO-11338] c08 N72-25208

Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c08 N72-25209

MOD 2 sequential function generator for multibit binary sequence  
[NASA-CASE-NPO-10636] c08 N72-25210

Digital video display system using cathode ray tube  
[NASA-CASE-NPO-11342] c09 N72-25248

Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c09 N72-25254

Thermal motor  
[NASA-CASE-NPO-11283] c09 N72-25260

Two phase flow system with discrete impinging two-phase jets



[NASA-CASE-NPO-11556]	c12 N72-25292	Stacked solar cell arrays	
Atmospheric sampling devices		[NASA-CASE-NPO-11771]	c03 N73-20040
[NASA-CASE-NPO-11373]	c13 N72-25323	A m-ary linear feedback shift register with	
Light sensor		binary logic	
[NASA-CASE-NPO-11311]	c14 N72-25414	[NASA-CASE-NPO-11868]	c10 N73-20254
Quick disconnect coupling		Apparatus for recovering matter adhered to a	
[NASA-CASE-NPO-11202]	c15 N72-25450	host surface	
Coaxial injector for reaction motors		[NASA-CASE-NPO-11213]	c15 N73-20514
[NASA-CASE-NPO-11095]	c15 N72-25455	Scan converting video tape recorder	
Bail screw linear actuator		[NASA-CASE-NPO-10166-1]	c07 N73-22076
[NASA-CASE-NPO-11222]	c15 N72-25456	Collapsible structure for an antenna	
Helium refrigerator and method for		reflector	
decontaminating the refrigerator		[NASA-CASE-NPO-11751]	c07 N73-24176
[NASA-CASE-NPO-10634]	c23 N72-25619	Pump for delivering heated fluids	
Uninsulated in-core thermionic diode		[NASA-CASE-NPO-11417]	c15 N73-24513
[NASA-CASE-NPO-10542]	c09 N72-27228	Ion thruster with a combination keeper electrode	
Audio frequency marker system		and electron baffle	
[NASA-CASE-NPO-11147]	c14 N72-27408	[NASA-CASE-NPO-11880]	c28 N73-24783
Light direction sensor		Solid propellant rocket motor	
[NASA-CASE-NPO-11201]	c14 N72-27409	[NASA-CASE-NPO-11559]	c28 N73-24784
Adjustable support		Code regenerative clean-up loop transponder for	
[NASA-CASE-NPO-10721]	c15 N72-27484	a mu-type ranging system	
Method for controlling vapor content of a gas		[NASA-CASE-NPO-11707]	c07 N73-25161
[NASA-CASE-NPO-10633]	c03 N72-28025	Numerical computer peripheral interactive device	
Maser for frequencies in the 7-20 GHz range		with manual controls	
[NASA-CASE-NPO-11437]	c16 N72-28521	[NASA-CASE-NPO-11497]	c08 N73-25206
Thin film temperature sensor and method of		Radiant source tracker independent of	
making same		nonconstant irradiance	
[NASA-CASE-NPO-11775]	c26 N72-28761	[NASA-CASE-NPO-11686]	c14 N73-25462
Circularly polarized antenna		Two carrier communication system with single	
[NASA-CASE-ERC-10214]	c09 N72-31235	transmitter	
Singly-curved reflector for use in high-gain		[NASA-CASE-NPO-11548]	c07 N73-26118
antennas		High pulse rate high resolution optical radar	
[NASA-CASE-NPO-11361]	c07 N72-32169	system	
Digital slope threshold data compressor		[NASA-CASE-NPO-11426]	c07 N73-26119
[NASA-CASE-NPO-11630]	c08 N72-33172	Counting digital filters	
Continuously variable voltage controlled phase		[NASA-CASE-NPO-11821-1]	c08 N73-26175
shifter		Automated attendance accounting system	
[NASA-CASE-NPO-11129]	c09 N72-33204	[NASA-CASE-NPO-11456]	c08 N73-26176
Pseudonoise sequence generators with three tap		Low phase noise digital frequency divider	
linear feedback shift registers		[NASA-CASE-NPO-11569]	c10 N73-26229
[NASA-CASE-NPO-11406]	c08 N73-12175	Vehicle for use in planetary exploration	
Versatile arithmetic unit for high speed		[NASA-CASE-NPO-11366]	c11 N73-26238
sequential decoder		Temperature control system with a pulse width	
[NASA-CASE-NPO-11371]	c08 N73-12177	modulated bridge	
Dual frequency microwave reflex feed		[NASA-CASE-NPO-11304]	c14 N73-26430
[NASA-CASE-NPO-13091-1]	c09 N73-12214	Disconnect unit	
Audio system with means for reducing noise effects		[NASA-CASE-NPO-11330]	c33 N73-26958
[NASA-CASE-NPO-11631]	c10 N73-12244	Filter for third order phase locked loops	
Interferometer-polarimeter		[NASA-CASE-NPO-11941-1]	c10 N73-27171
[NASA-CASE-NPO-11239]	c14 N73-12446	Receiver with an improved phase lock loop in a	
Irradiance measuring device		multichannel telemetry system with suppressed	
[NASA-CASE-NPO-11493]	c14 N73-12447	carrier	
Program for computer aided reliability estimation		[NASA-CASE-NPO-11593-1]	c07 N73-28012
[NASA-CASE-NPO-13086-1]	c15 N73-12495	Analog-to-digital converter	
Apparatus for deriving synchronizing pulses from		[NASA-CASE-XNP-00477]	c08 N73-28045
pulses in a single channel PCM communications		Pseudonoise (PN) synchronization of data system	
system		with derivation of clock frequency from	
[NASA-CASE-NPO-11302-1]	c07 N73-13149	received signal for clocking receiver PN	
Rotary vane attenuator wherein rotor has		generator	
orthogonally disposed resistive and dielectric		[NASA-CASE-XNP-03623]	c09 N73-28084
cards		Apparatus and method for measuring the Seebeck	
[NASA-CASE-NPO-11418-1]	c14 N73-13420	coefficient and resistivity of materials	
Gas flow control device		[NASA-CASE-NPO-11749]	c14 N73-28486
[NASA-CASE-NPO-11479]	c15 N73-13462	Dual purpose optical instrument capable of	
Electrolytic gas operated actuator		simultaneously acting as spectrometer and	
[NASA-CASE-NPO-11369]	c15 N73-13467	diffractometer	
Dual purpose momentum wheels for spacecraft with		[NASA-CASE-XNP-05231]	c14 N73-28491
magnetic recording		Continuous magnetic flux pump	
[NASA-CASE-NPO-11481]	c21 N73-13644	[NASA-CASE-XNP-01187]	c15 N73-28516
Multiple reflection conical microwave antenna		Preparation of alkali metal dispersions	
[NASA-CASE-NPO-11661]	c07 N73-14130	[NASA-CASE-XNP-08876]	c17 N73-28573
Cyclically operable optical shutter		Superconductive magnetic-field-trapping device	
[NASA-CASE-NPO-10758]	c14 N73-14427	[NASA-CASE-XNP-01185]	c26 N73-28710
Heat detection and compositions and devices		Automatic carrier acquisition system	
therefor		[NASA-CASE-NPO-11628-1]	c07 N73-30113
[NASA-CASE-NPO-10764-1]	c14 N73-14428	Perofluoridic solenoid	
Parallel-plate viscometer with double diaphragm		[NASA-CASE-NPO-11738-1]	c09 N73-30185
suspension		Silent emergency alarm system for schools and	
[NASA-CASE-NPO-11387]	c14 N73-14429	the like	
Rotary actuator		[NASA-CASE-NPO-11307-1]	c10 N73-30205
[NASA-CASE-NPO-10680]	c31 N73-14855	RF-source resistance meters	
Magnetically actuated tuning method for Gunn		[NASA-CASE-NPO-11291-1]	c14 N73-30388
oscillators		Event sequence detector	
[NASA-CASE-NPO-12106]	c09 N73-15235	[NASA-CASE-NPO-11703-1]	c10 N73-32144
Multichannel telemetry system		Soil penetrometer	
[NASA-CASE-NPO-11572]	c07 N73-16121	[NASA-CASE-XNP-05530]	c14 N73-32321
Data-aided carrier tracking loops		Quadrupole mass filter with means to generate a	
[NASA-CASE-NPO-11282]	c10 N73-16205	noise spectrum exclusive of the resonant	
		frequency of the desired ions to deflect	

stable ions			Method of producing a storage bulb for an atomic
[NASA-CASE-XNP-04231]	c14	N73-32325	hydrogen maser
Magnetic-flux pump			[NASA-CASE-NFO-13050-1]
[NASA-CASE-XNP-01188]	c15	N73-32361	c36 N75-15029
Burrowing apparatus			Combined pressure regulator and shutoff valve
[NASA-CASE-XNP-07169]	c15	N73-32362	[NASA-CASE-NFO-13201-1]
Electrostatically controlled heat shutter			c37 N75-15050
[NASA-CASE-NPO-11942-1]	c33	N73-32818	Simultaneous acquisition of tracking data from
Method and apparatus for a single channel			two stations
digital communications system			[NASA-CASE-NFC-13292-1]
[NASA-CASE-NPO-11302-2]	c32	N74-10132	c32 N75-15854
Controlled oscillator system with a time			Shock absorbing mount for electrical components
dependent output frequency			[NASA-CASE-NPO-13253-1]
[NASA-CASE-NPO-11962-1]	c33	N74-10194	c37 N75-18573
Low loss dichroic plate			System for generating timing and control signals
[NASA-CASE-NPO-13171-1]	c32	N74-11000	[NASA-CASE-NPO-13125-1]
Image data rate converter having a drum with a			c33 N75-19519
fixed head and a rotatable head			Motor run-up system
[NASA-CASE-NPO-11659-1]	c35	N74-11283	[NASA-CASE-NPO-13374-1]
Monitoring atmospheric pollutants with a			c33 N75-19524
heterodyne radiometer transmitter-receiver			Deep trap, laser activated image converting system
[NASA-CASE-NPO-11919-1]	c35	N74-11284	[NASA-CASE-NFC-13131-1]
Digital second-order phase-locked loop			c36 N75-19652
[NASA-CASE-NFO-11905-1]	c33	N74-12887	Multitarget sequential sputtering apparatus
Automatic vehicle location system			[NASA-CASE-NPO-13345-1]
[NASA-CASE-NPO-11850-1]	c32	N74-12912	c37 N75-19684
Thermomagnetic recording and magneto-optic			Wide angle sun sensor
playback system having constant intensity			[NASA-CASE-NPO-13327-1]
laser beam control			c35 N75-23910
[NASA-CASE-NPO-11317-2]	c36	N74-13205	Material suspension within an acoustically
Use of thin film light detector			excited resonant chamber
[NASA-CASE-NPO-11432-2]	c35	N74-15090	[NASA-CASE-NFO-13263-1]
Temperature compensated digital inertial sensor			c12 N75-24774
[NASA-CASE-NPO-13044-1]	c35	N74-15094	Heat operated cryogenic electrical generator
Compact hydrogenator			[NASA-CASE-NPO-13303-1]
[NASA-CASE-NPO-11682-1]	c35	N74-15127	c20 N75-24837
Short range laser obstacle detector			System for interference signal nulling by
[NASA-CASE-NPO-11856-1]	c36	N74-15145	polarization adjustment
System for stabilizing cable phase delay			[NASA-CASE-NPO-13140-1]
utilizing a coaxial cable under pressure			c32 N75-24982
[NASA-CASE-NPO-13138-1]	c33	N74-17927	Heat detection and compositions and devices
Storage battery comprising negative plates of a			therefor
wedge shaped configuration			[NASA-CASE-NFO-10764-2]
[NASA-CASE-NPO-11806-1]	c44	N74-19693	c35 N75-25122
Gated compressor, distortionless signal limiter			Servo-controlled intravital microscope system
[NASA-CASE-NPO-11820-1]	c32	N74-19788	[NASA-CASE-NFC-13214-1]
Apparatus for scanning the surface of a			c35 N75-25123
cylindrical body			Vehicle locating system utilizing AM
[NASA-CASE-NPO-11861-1]	c36	N74-20009	broadcasting station carriers
Decision feedback loop for tracking a polyphase			[NASA-CASE-NPO-13217-1]
modulated carrier			c32 N75-26194
[NASA-CASE-NPO-13103-1]	c32	N74-20811	Asynchronous, multiplexing, single line
Optically actuated two position mechanical mover			transmission and recovery data system
[NASA-CASE-NPO-13105-1]	c37	N74-21060	[NASA-CASE-NPO-13321-1]
Thin film gauge			c32 N75-26195
[NASA-CASE-NPO-10617-1]	c35	N74-22095	Fluorescence detector for monitoring atmospheric
High isolation RF signal selection switches			pollutants
[NASA-CASE-NPO-13081-1]	c33	N74-22814	[NASA-CASE-NPO-13231-1]
Single reflector interference spectrometer and			c45 N75-27585
drive system therefor			Cooperative multiaxis sensor for teleoperation
[NASA-CASE-NPO-11932-1]	c35	N74-23040	of article manipulating apparatus
Scanning nozzle plating system			[NASA-CASE-NPO-13386-1]
[NASA-CASE-NPO-11758-1]	c31	N74-23065	c54 N75-27758
Rock sampling			Heat sterilizable patient ventilator
[NASA-CASE-XNP-10007-1]	c46	N74-23068	[NASA-CASE-NPO-13313-1]
Rock sampling			c54 N75-27761
[NASA-CASE-XNP-05755]	c46	N74-23069	Refrigerated coaxial coupling
Miniature multichannel biotelemetry system			[NASA-CASE-NPO-13504-1]
[NASA-CASE-NPO-13065-1]	c52	N74-26625	c33 N75-30430
Dispensing targets for ion beam particle			Electric power generation system directory from
generators			laser power
[NASA-CASE-NPO-13112-1]	c73	N74-26767	[NASA-CASE-NFO-13308-1]
Optically detonated explosive device			c36 N75-30524
[NASA-CASE-NPO-11743-1]	c28	N74-27425	Subminiature insertable force transducer
Coherent receiver employing nonlinear coherence			[NASA-CASE-NFC-13423-1]
detection for carrier tracking			c33 N75-31329
[NASA-CASE-NPO-11921-1]	c32	N74-30523	Symmetrical odd-modulus frequency divider
Digital servo control of random sound test			[NASA-CASE-NFO-13426-1]
excitation			c33 N75-31330
[NASA-CASE-NPO-11623-1]	c71	N74-31148	Stored charge transistor
Apparatus for forming drive belts			[NASA-CASE-NFO-11156-2]
[NASA-CASE-NPO-13205-1]	c31	N74-32917	c33 N75-31331
Tool for use in lifting pin supported objects			Doped Josephson tunneling junction for use in a
[NASA-CASE-NPO-13157-1]	c37	N74-32918	sensitive IR detector
Preparing oxidizer coated metal fuel particles			[NASA-CASE-NFO-13348-1]
[NASA-CASE-NPO-11975-1]	c28	N74-33209	c33 N75-31332
Geneva mechanism			Acoustically controlled distributed feedback laser
[NASA-CASE-NPO-13281-1]	c37	N75-13266	[NASA-CASE-NFC-13175-1]
			c36 N75-31427
			Inert gas metallic vapor laser
			[NASA-CASE-NPO-13449-1]
			c36 N75-32441
			Helium refrigerator
			[NASA-CASE-NPO-13435-1]
			c31 N76-14284
			Nonlinear nonsingular feedback shift registers
			[NASA-CASE-NFO-13451-1]
			c33 N76-14373
			Strain gage mounting assembly
			[NASA-CASE-NPO-13170-1]
			c35 N76-14430
			Thermostatically controlled non-tracking type
			solar energy concentrator
			[NASA-CASE-NPO-13497-1]
			c44 N76-14602
			Multi-computer multiple data path hardware
			exchange system
			[NASA-CASE-NFO-13422-1]
			c60 N76-14818
			Cermet composition and method of fabrication
			[NASA-CASE-NFO-13120-1]
			c27 N76-15311
			Dichroic plate
			[NASA-CASE-NPO-13506-1]
			c35 N76-15435
			Magnetometer using superconducting rotating body
			[NASA-CASE-NFO-13388-1]
			c35 N76-16390
			Scan converting video tape recorder
			[NASA-CASE-NFC-10166-2]
			c35 N76-16391
			Hydrogen rich gas generator
			[NASA-CASE-NPO-13342-1]
			c37 N76-16446
			Automated system for identifying traces of
			organic chemical compounds in aqueous solutions

[NASA-CASE-NPO-13063-1]	c25 N76-18245	High temperature oxidation resistant cermet compositions	
Analog to digital converter		[NASA-CASE-NPC-13666-1]	c27 N77-13217
[NASA-CASE-NPO-13385-1]	c33 N76-18345	Frequency discriminator and phase detector circuit	
Sampler of gas borne particles		[NASA-CASE-NPO-11515-1]	c33 N77-13315
[NASA-CASE-NPO-13396-1]	c35 N76-18401	Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump	
Stark-effect modulation of CO <sub>2</sub> laser with NH <sub>2</sub> D		[NASA-CASE-NPO-13663-1]	c35 N77-14406
[NASA-CASE-NPO-11945-1]	c36 N76-18427	Thermocouple installation	
Diffused waveguiding capillary tube with distributed feedback for a gas laser		[NASA-CASE-NPO-13540-1]	c35 N77-14409
[NASA-CASE-NPO-13544-1]	c36 N76-18428	Method and apparatus for background signal reduction in opto-acoustic absorption measurement	
System for minimizing internal combustion engine pollution emission		[NASA-CASE-NPO-13683-1]	c35 N77-14411
[NASA-CASE-NPO-13402-1]	c37 N76-18457	Nuclear thermionic converter	
Hydrogen-bromine secondary battery		[NASA-CASE-NPO-13121-1]	c73 N77-18891
[NASA-CASE-NPO-13237-1]	c44 N76-18641	Multiple rate digital command detection system with range clean-up capability	
Hydrogen-rich gas generator		[NASA-CASE-NPO-13753-1]	c32 N77-20289
[NASA-CASE-NPO-13464-1]	c44 N76-18642	Charge storage diode modulators and demodulators	
Zinc-halide battery with molten electrolyte		[NASA-CASE-NPO-10189-1]	c33 N77-21314
[NASA-CASE-NPO-11961-1]	c44 N76-18643	Compact, high intensity arc lamp with internal magnetic field producing means	
Priority interrupt system		[NASA-CASE-NPO-11510-1]	c33 N77-21315
[NASA-CASE-NPO-13067-1]	c60 N76-18800	Depressurization of arc lamps	
Miniature muscle displacement transducer		[NASA-CASE-NPO-10790-1]	c33 N77-21316
[NASA-CASE-NPO-13519-1]	c33 N76-19338	Electromagnetic transducer recording head having a laminated core section and tapered gap	
Zero torque gear head wrench		[NASA-CASE-NPO-10711-1]	c35 N77-21392
[NASA-CASE-NPO-13059-1]	c37 N76-20480	Cryogenic liquid sensor	
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[NASA-CASE-NPO-13443-1]	c76 N76-20994	Uniform variable light source	
Indicator providing continuous indication of the presence of a specific pollutant in air		[NASA-CASE-NPO-11429-1]	c74 N77-21941
[NASA-CASE-NPO-13474-1]	c45 N76-21742	Arc control in compact arc lamps	
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[NASA-CASE-NPO-13139-1]	c60 N76-21914	Hydraulic drain means for servo-systems	
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[NASA-CASE-NPO-13462-1]	c35 N76-24524	Automated multi-level vehicle parking system	
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[NASA-CASE-NPO-13567-1]	c44 N76-29701	Lightweight reflector assembly	
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[NASA-CASE-ARC-10470-1]	c02 N73-26005	Diode-quad bridge circuit means	
Temperature controller for a fluid cooled garment		[NASA-CASE-ARC-10364-2]	c33 N75-25041
[NASA-CASE-ARC-10599-1]	c05 N73-26071	Rotary plant growth accelerating apparatus	
Visual examination apparatus		[NASA-CASE-ARC-10722-1]	c51 N75-25503
[NASA-CASE-ARC-10329-1]	c05 N73-26072	Shoulder harness and lap belt restraint system	
Intumescent composition, foamed product prepared therewith, and process for making same		[NASA-CASE-ARC-10519-2]	c05 N75-25915
[NASA-CASE-ARC-10304-1]	c18 N73-26572	Gas chromatograph injection system	
Infrared tunable laser		[NASA-CASE-ARC-10344-2]	c35 N75-26334
[NASA-CASE-ARC-10463-1]	c09 N73-32111	Reference apparatus for medical ultrasonic transducer	
Low power electromagnetic flowmeter providing accurate zero set		[NASA-CASE-ARC-10753-1]	c54 N75-27760
[NASA-CASE-ARC-10362-1]	c14 N73-32326	Electric arc light source having undercut recessed anode	
Hand-held photomicroscope		[NASA-CASE-ARC-10266-1]	c33 N75-29318
[NASA-CASE-ARC-10468-1]	c14 N73-33361	G-load measuring and indicator apparatus	
Alignment apparatus using a laser having a gravitationally sensitive cavity reflector		[NASA-CASE-ARC-10806-1]	c35 N75-29381
[NASA-CASE-ARC-10444-1]	c16 N73-33397	NDIR gas analyzer based on absorption modulation ratios for known and unknown samples	
Polyimide foam for the thermal insulation and fire protection		[NASA-CASE-ARC-10802-1]	c35 N75-30502
[NASA-CASE-ARC-10464-1]	c27 N74-12812	Diatom infrared gasdynamic laser	
Flexible fire retardant polyisocyanate modified neoprene foam		[NASA-CASE-ARC-10370-1]	c36 N75-31426
[NASA-CASE-ARC-10180-1]	c27 N74-12814	Pneumatic load compensating or controlling system	
Heater-mixer for stored fluids		[NASA-CASE-ARC-10907-1]	c37 N75-32465
[NASA-CASE-ARC-10442-1]	c35 N74-15093	Combined dual scatter, local oscillator laser Doppler velocimeter	
Bi-metallic fluid displacement apparatus		[NASA-CASE-ARC-10642-1]	c36 N76-14447
[NASA-CASE-ARC-10441-1]	c35 N74-15126	Fiber modified polyurethane foam for ballistic protection	
Automatic real-time pair-feeding system for animals		[NASA-CASE-ARC-10714-1]	c27 N76-15310
[NASA-CASE-ARC-10302-1]	c51 N74-15778	Transparent fire resistant polymeric structures	
Overvoltage protection network		[NASA-CASE-ARC-10813-1]	c27 N76-16230
[NASA-CASE-ARC-10197-1]	c33 N74-17929	Noise suppressor for turbo fan jet engines	
Ultrasonic biomedical measuring and recording apparatus		[NASA-CASE-ARC-10812-1]	c07 N76-18131
[NASA-CASE-ARC-10597-1]	c52 N74-20726	Modulated hydrogen ion flame detector	
Ultraviolet and thermally stable polymer compositions		[NASA-CASE-ARC-10322-1]	c35 N76-18403
[NASA-CASE-ARC-10592-1]	c27 N74-21156	Electrical conductivity cell and method for fabricating the same	
		[NASA-CASE-ARC-10810-1]	c33 N76-19339
		Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector	
		[NASA-CASE-ARC-10631-1]	c74 N76-20958

Trielectrode capacitive pressure transducer [NASA-CASE-ARC-10711-2]	c33 N76-21390	Intumescent coatings containing 4,4'-dinitrosulfanilide [NASA-CASE-ARC-11042-1]	c24 N78-14096
Nulling device for detection of trace gases by NDIR absorption [NASA-CASE-ARC-10760-1]	c25 N76-22323	Automatic multiple-sample applicator and electrophoresis apparatus [NASA-CASE-ARC-10991-1]	c25 N78-14104
Silica reusable surface insulation [NASA-CASE-ARC-10721-1]	c27 N76-22376	Flow separation detector [NASA-CASE-ARC-11046-1]	c35 N78-14364
Optical alignment device [NASA-CASE-ARC-10932-1]	c74 N76-22993	Honeycomb-laminate composite structure [NASA-CASE-ARC-10913-1]	c24 N78-15180
Vehicle simulator binocular multiplanar visual display system [NASA-CASE-ARC-10808-1]	c09 N76-24280	Heat pipe with dual working fluids [NASA-CASE-ARC-10198]	c34 N78-17336
Readout electrode assembly for measuring biological impedance [NASA-CASE-ARC-10816-1]	c35 N76-24525	Multi-chamber controllable heat pipe [NASA-CASE-ARC-10199]	c34 N78-17337
System for measuring Reynolds in a turbulently flowing fluid [NASA-CASE-ARC-10755-2]	c34 N76-27517	Walking boot assembly [NASA-CASE-ARC-11101-1]	c54 N78-17675
Oblique-wing supersonic aircraft [NASA-CASE-ARC-10470-3]	c05 N76-29217	Full color hybrid display for aircraft simulators [NASA-CASE-ARC-10903-1]	c09 N78-18083
Accelerometer telemetry system [NASA-CASE-ARC-10849-1]	c17 N76-29347	Apparatus for measuring a sorbate dispersed in a fluid stream [NASA-CASE-ARC-10896-1]	c35 N78-19465
Miniature ingestible telemeter devices to measure deep-body temperature [NASA-CASE-ARC-10583-1]	c52 N76-29894	Automatic fluid dispenser [NASA-CASE-ARC-10820-1]	c35 N78-19466
Visual examination apparatus [US-PATENT-RF-28,921]	c52 N76-30793	Intumescent-ablator coatings using endothermic fillers [NASA-CASE-ARC-11043-1]	c24 N78-27180
Integrated structure vacuum tube [NASA-CASE-ARC-10445-1]	c31 N76-31365	Low density bismaleimide-carbon microballoon composites [NASA-CASE-ARC-11040-2]	c24 N78-27184
Ultraviolet and thermally stable polymer compositions [NASA-CASE-ARC-10592-2]	c27 N76-32315	Rotary leveling base platform [NASA-CASE-ARC-10981-1]	c37 N78-27425
Biomedical ultrasonoscope [NASA-CASE-ARC-10994-1]	c52 N76-33835	Tread drum for animals [NASA-CASE-ARC-10917-1]	c51 N78-27733
Thermistor holder for skin temperature measurements [NASA-CASE-ARC-10855-1]	c52 N77-10780	Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles [NASA-CASE-ARC-11008-1]	c27 N78-31232
Smoke generator [NASA-CASE-ARC-10905-1]	c37 N77-13418	Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge [NASA-CASE-ARC-11057-1]	c27 N78-31233
Electron microscope aperture system [NASA-CASE-ARC-10448-3]	c35 N77-14408	Spacesuit mobility joints [NASA-CASE-ARC-11058-1]	c54 N78-31735
Liquid cooled brassiere and method of diagnosing malignant tumors therewith [NASA-CASE-ARC-11007-1]	c52 N77-14736	Spacesuit torso closure [NASA-CASE-ARC-11100-1]	c54 N78-31736
Hingeless helicopter rotor with improved stability [NASA-CASE-ARC-10807-1]	c05 N77-17029	Process for preparing higher oxides of the alkali and alkaline earth metals [NASA-CASE-ARC-10992-1]	c26 N78-32229
The engine air intake system [NASA-CASE-ARC-10761-1]	c07 N77-18154	Reaction cured glass and glass coatings [NASA-CASE-ARC-11051-1]	c27 N78-32260
Spring operated accelerator and constant force spring mechanism therefor [NASA-CASE-ARC-10898-1]	c35 N77-18417	Angle detector [NASA-CASE-ARC-11036-1]	c35 N78-32395
Rotating launch device for a remotely piloted aircraft [NASA-CASE-ARC-10979-1]	c09 N77-19076	Process for producing a well-adhered durable optical coating on an optical plastic substrate [NASA-CASE-ARC-11039-1]	c74 N78-32854
Tubular sublimatory evaporator heat sink [NASA-CASE-ARC-10912-1]	c34 N77-19353	Process for the preparation of calcium superoxide [NASA-CASE-ARC-11053-1]	c25 N79-10162
Selective data segment monitoring system [NASA-CASE-ARC-10899-1]	c60 N77-19760	Contour detector and data acquisition system for the left ventricular outline [NASA-CASE-ARC-10985-1]	c52 N79-10724
All sky pointing attitude control system [NASA-CASE-ARC-10716-1]	c35 N77-20399	Ambient cure polyimide foams [NASA-CASE-ARC-11170-1]	c27 N79-11215
Metallic hot wire anemometer [NASA-CASE-ARC-10911-1]	c35 N77-20400	Microelectrophoretic apparatus and process [NASA-CASE-ARC-11121-1]	c25 N79-14169
Optical instrument employing reticle having preselected visual response pattern formed thereon [NASA-CASE-ARC-10976-1]	c74 N77-22950	Preparation of dielectric coating of variable dielectric constant by plasma polymerization [NASA-CASE-ARC-10892-2]	c27 N79-14214
Sampling video compression system [NASA-CASE-ARC-10984-1]	c32 N77-24328	Electric discharge for treatment of trace contaminants [NASA-CASE-ARC-10975-1]	c33 N79-15245
Method for making a hot wire anemometer and product thereof [NASA-CASE-ARC-10900-1]	c35 N77-24454	Low density bismaleimide-carbon microballoon composites [NASA-CASE-ARC-11040-1]	c24 N79-16915
Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction [NASA-CASE-ARC-10970-1]	c36 N77-25501	Constant lift rotor for a heavier than air craft [NASA-CASE-ARC-11045-1]	c05 N79-17847
System for measuring three fluctuating velocity components in a turbulently flowing fluid [NASA-CASE-ARC-10974-1]	c34 N77-27345	Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers [NASA-CASE-ARC-10915-2]	c27 N79-18052
Twist-capacitive shaft angle encoder with analog output signal [NASA-CASE-ARC-10897-1]	c33 N77-31404	Miniature implantable ultrasonic echosonometer [NASA-CASE-ARC-11035-1]	c52 N79-18580
Anthropomorphic master/slave manipulator system [NASA-CASE-ARC-10756-1]	c54 N77-32721	Preparation of heterocyclic block copolymer omega-bisamidoximes [NASA-CASE-ARC-11060-1]	c27 N79-22300
Mechanical energy storage device for hip disarticulation [NASA-CASE-ARC-10916-1]	c52 N78-10686	Fibrous refractory composite insulation [NASA-CASE-ARC-11169-1]	c24 N79-24062
Optically selective, acoustically resonant gas detecting transducer [NASA-CASE-ARC-10639-1]	c35 N78-13400	Spacesuit mobility knee joints [NASA-CASE-ARC-11058-2]	c54 N79-24651
		Fire protection covering for small diameter missiles	

[NASA-CASE-ARC-11104-1] c15 N79-26100  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c52 N79-26771  
Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c37 N79-28551  
Acoustically swept rotor  
[NASA-CASE-ARC-11106-1] c05 N80-14107  
Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides  
[NASA-CASE-ARC-11107-1] c25 N80-16116  
Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c37 N80-18393  
Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c52 N80-18691  
Method for making patterns for resin matrix composites  
[NASA-CASE-ARC-11246-1] c24 N80-22410  
Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c25 N80-23383  
Reverse osmosis membrane of high urea rejection properties  
[NASA-CASE-ARC-10980-1] c27 N80-23452  
Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c07 N80-26298  
Preparation of perfluorinated imidoylamidoximes  
[NASA-CASE-ARC-11267-1] c23 N80-26386  
Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c25 N80-26407  
Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c54 N80-30043  
An improved synthesis of 2,4,8,10-tetroxaspiro (5.5) undecane  
[NASA-CASE-ARC-11243-2] c23 N80-31472  
Synthesis of dawsnites  
[NASA-CASE-ARC-113261-1] c25 N80-31490  
Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c07 N80-32392  
Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c52 N80-33081  
Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c24 N81-13999  
Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c25 N81-14016  
Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c51 N81-14605  
Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c52 N81-14612  
Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N81-14613  
Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c74 N81-16882  
Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c27 N81-17259  
The 1,2,4-oxadiazole elastomers  
[NASA-CASE-ARC-11253-1] c27 N81-17262  
Pressure control valve  
[NASA-CASE-ARC-11251-1] c37 N81-17433  
Intrusion detection method and apparatus  
[NASA-CASE-ARC-11317-1] c35 N81-19430  
Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c36 N81-19439  
Autonomous navigation system  
[NASA-CASE-ARC-11257-1] c04 N81-21047  
Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c27 N81-24256  
Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c52 N81-25662  
Process for the preparation of polycarboranylphosphazenes  
[NASA-CASE-ARC-11176-2] c27 N81-27271  
Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c27 N81-27272  
Refrigerator module, system and process  
[NASA-CASE-ARC-11263-1] c31 N81-27328  
Method of carbonizing polyacrylonitrile fibers and resulting product  
[NASA-CASE-ARC-11261-1] c24 N81-29164  
Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c36 N81-29415

Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c52 N81-29763  
Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c52 N81-29764  
Resin composition, process for producing the same, product produced therefrom and process for producing said product  
[NASA-CASE-ARC-11331-1] c27 N81-31363  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c27 N81-31364  
Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-1] c52 N81-33804  
High temperature glass thermal control structure and coating  
[NASA-CASE-ARC-11164-1] c27 N82-10228  
Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c25 N82-12168  
Method and apparatus for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c51 N82-12739  
Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c04 N82-16059  
Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c23 N82-16174  
**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. HUGH L. DRYDEN FLIGHT RESEARCH CENTER, EDWARDS, CALIF.**  
Fifth wheel  
[NASA-CASE-FRC-10081-1] c37 N77-14477  
Window comparator  
[NASA-CASE-FRC-10090-1] c33 N78-18308  
Wire stripper  
[NASA-CASE-FRC-10111-1] c37 N79-10419  
Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c05 N79-12061  
Voltage regulator for battery power source  
[NASA-CASE-FRC-10116-1] c33 N79-23345  
An annular wing  
[NASA-CASE-FRC-11007-2] c02 N79-24959  
Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c06 N80-18036  
Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c35 N80-20560  
Pulse transducer with artifact signal attenuator  
[NASA-CASE-FRC-11012-1] c52 N80-23969  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c33 N80-26599  
System for use in conducting wake investigation for a wing in flight  
[NASA-CASE-FRC-11024-1] c02 N80-28300  
Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c33 N80-29583  
Improved low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c85 N80-33312  
Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c06 N81-17057  
Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c43 N81-17499  
Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c06 N81-22048  
Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c05 N81-24047  
Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c35 N81-26431  
Electrical servo actuator bracket  
[NASA-CASE-FRC-11044-1] c37 N81-33483  
Directional flow sensor  
[NASA-CASE-FRC-11074-1] c35 N82-11436  
System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c06 N82-16075  
**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. ELECTRONICS RESEARCH CENTER, CAMBRIDGE, MASS.**  
Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c16 N69-31343  
A method for the deposition of beta-silicon carbide by isoeptaxy  
[NASA-CASE-ERC-10120] c26 N69-33482

Full flow with shut off and selective drainage control valve Patent application  
[NASA-CASE-ERC-10208] c15 N70-10867

A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c09 N70-11148

Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c09 N71-12539

Apparatus and method for separating a semiconductor wafer Patent  
[NASA-CASE-ERC-10138] c26 N71-14354

Focused image holography with extended sources Patent  
[NASA-CASE-ERC-10019] c16 N71-15551

Recording and reconstructing focused image holograms Patent  
[NASA-CASE-ERC-10017] c16 N71-15567

Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c14 N71-18483

Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c09 N71-18721

Array phasing device Patent  
[NASA-CASE-ERC-10046] c10 N71-18722

Parametric microwave noise generator Patent  
[NASA-CASE-XER-11019] c09 N71-23598

Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c09 N71-24800

Repetitively pulsed, wavelength selective laser Patent  
[NASA-CASE-ERC-10178] c16 N71-24832

Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c23 N71-24868

Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c09 N71-24893

Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c15 N71-24896

Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c15 N71-24910

Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c21 N71-24948

Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c26 N71-25490

A solid state acoustic variable time delay line Patent  
[NASA-CASE-ERC-10032] c10 N71-25900

Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c16 N71-26154

Electromechanical control actuator system Patent  
[NASA-CASE-ERC-10022] c15 N71-26635

Method and apparatus for detecting gross leaks Patent  
[NASA-CASE-ERC-10033] c14 N71-26672

Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c09 N71-26678

Voltage regulator Patent  
[NASA-CASE-ERC-10113] c09 N71-27053

A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c14 N71-27090

Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c14 N71-27334

Constant frequency output two stage induction machine systems Patent  
[NASA-CASE-ERC-10065] c09 N71-27364

Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c15 N71-28465

Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c09 N71-28618

Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-ERC-10014] c14 N71-28863

Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c14 N71-28992

Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c14 N71-28994

Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c07 N71-29065

Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c16 N71-29131

Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c09 N71-33519

Optical systems having spatially invariant outputs  
[NASA-CASE-ERC-10248] c14 N72-17323

Method of detecting impending saturation of magnetic cores  
[NASA-CASE-ERC-10089] c23 N72-17747

Logarithmic function generator utilizing an exponentially varying signal in an inverse manner  
[NASA-CASE-ERC-10267] c09 N72-23173

Method and apparatus for limiting field emission current  
[NASA-CASE-ERC-10015-2] c10 N72-27246

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FLIGHT RESEARCH CENTER, EDWARDS, CALIF.**

Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c14 N69-27503

Three axis controller Patent  
[NASA-CASE-XFR-00181] c21 N70-33279

Catalyst bed removing tool Patent  
[NASA-CASE-XFR-00811] c15 N70-36901

Two-axis controller Patent  
[NASA-CASE-XFR-04104] c03 N70-42073

Controlled visibility device for an aircraft Patent  
[NASA-CASE-XFR-04147] c11 N71-10748

Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c05 N71-11189

Lifting body Patent Application  
[NASA-CASE-FRC-10063] c01 N71-12217

Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c02 N71-13421

Quick attach mechanism Patent  
[NASA-CASE-XFR-05421] c15 N71-22994

Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c33 N71-23085

Threadless fastener apparatus Patent  
[NASA-CASE-XFR-05302] c15 N71-23254

Traversing probe Patent  
[NASA-CASE-XFR-02007] c12 N71-24692

Layout tool Patent  
[NASA-CASE-FRC-10005] c15 N71-26145

Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c09 N72-22200

Acoustical transducer calibrating system and apparatus  
[NASA-CASE-FRC-10060-1] c14 N73-27379

Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c35 N74-13129

Terminal guidance system  
[NASA-CASE-FRC-10049-1] c04 N74-13420

Full wave modulator-demodulator amplifier apparatus  
[NASA-CASE-FRC-10072-1] c33 N74-14939

Rotating raster generator  
[NASA-CASE-FRC-10071-1] c32 N74-20813

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.  
GODDARD INST. FOR SPACE STUDIES, NEW YORK.**

Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c51 N77-22794

Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c35 N77-24455

Length controlled stabilized mode-lock ND:YAG laser  
[NASA-CASE-GSC-11571-1] c36 N77-25499

Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c33 N77-26386

Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942

Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366

Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c37 N77-27400

Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c32 N77-28346

Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c74 N77-28932

Pseudo noise code and data transmission method and apparatus



[NASA-CASE-GSC-12017-1]	c32 N77-30308	Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent	[NASA-CASE-XGS-02608]	c07 N70-41678
Speech analyzer				
[NASA-CASE-GSC-11898-1]	c32 N77-30309	Prevention of pressure build-up in electrochemical cells Patent	[NASA-CASE-XGS-01419]	c03 N70-41864
Automatic transponder				
[NASA-CASE-GSC-12075-1]	c32 N77-31350	Variable time constant smoothing circuit Patent	[NASA-CASE-XGS-01983]	c10 N70-41964
Method of treating the surface of a glass member				
[NASA-CASE-GSC-12110-1]	c27 N77-32308	Endless tape transport mechanism Patent	[NASA-CASE-XGS-01223]	c07 N71-10609
Flat-plate heat pipe				
[NASA-CASE-GSC-11998-1]	c34 N77-32413	Reversible ring counter employing cascaded single SCR stages Patent	[NASA-CASE-XGS-01473]	c09 N71-10673
Fluid sampling device				
[NASA-CASE-GSC-12143-1]	c35 N77-32456	Electronic beam switching commutator Patent	[NASA-CASE-XGS-01451]	c09 N71-10677
Analog to digital converter for two-dimensional radiant energy array computers				
[NASA-CASE-GSC-11839-3]	c60 N77-32731	Sun tracker with rotatable plane-parallel plate and two photocells Patent	[NASA-CASE-XGS-01159]	c21 N71-10678
Remote sensing of vegetation and soil using microwave ellipsometry				
[NASA-CASE-GSC-11976-1]	c43 N78-10529	Non-magnetic battery case Patent	[NASA-CASE-XGS-00886]	c03 N71-11053
Memory device for two-dimensional radiant energy array computers				
[NASA-CASE-GSC-11839-2]	c60 N78-10709	Interconnection of solar cells Patent	[NASA-CASE-XGS-01475]	c03 N71-11058
<b>NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.</b>				
<b>GODDARD SPACE FLIGHT CENTER, GREENBELT, MD.</b>				
Regulated dc to dc converter				
[NASA-CASE-XGS-03429]	c03 N69-21330	Frequency shift keyed demodulator Patent	[NASA-CASE-XGS-02889]	c07 N71-11282
Apparatus for measuring swelling characteristics of membranes				
[NASA-CASE-XGS-03865]	c14 N69-21363	Bi-polar phase detector and corrector for split phase PCM data signals Patent	[NASA-CASE-XGS-01590]	c07 N71-12392
Tumbler system to provide random motion				
[NASA-CASE-XGS-02437]	c15 N69-21472	Data processor having multiple sections activated at different times by selective power coupling to the sections Patent	[NASA-CASE-XGS-04767]	c08 N71-12494
Automatic acquisition system for phase-lock loop				
[NASA-CASE-XGS-04994]	c09 N69-21543	Position location system and method Patent	[NASA-CASE-GSC-10087-2]	c21 N71-13958
Low power drain semi-conductor circuit				
[NASA-CASE-XGS-04999]	c09 N69-24317	Fire resistant coating composition Patent	[NASA-CASE-GSC-10072]	c18 N71-14014
Spacecraft battery seals				
[NASA-CASE-XGS-03864]	c15 N69-24320	Passively regulated water electrolysis rocket engine Patent	[NASA-CASE-XGS-08729]	c28 N71-14044
Scanning aspect sensor employing an apertured disc and a commutator				
[NASA-CASE-XGS-08266]	c14 N69-27432	Attitude control system Patent	[NASA-CASE-XGS-04393]	c21 N71-14159
Monopulse system with an electronic scanner				
[NASA-CASE-XGS-05582]	c07 N69-27460	Retrodirective modulator Patent	[NASA-CASE-GSC-10062]	c14 N71-15605
Ring counter				
[NASA-CASE-XGS-03095]	c09 N69-27463	Spacecraft attitude detection system by stellar reference Patent	[NASA-CASE-XGS-03431]	c21 N71-15642
Retrodirective optical system				
[NASA-CASE-XGS-04480]	c16 N69-27491	Cartwheel satellite synchronization system Patent	[NASA-CASE-XGS-05579]	c31 N71-15676
Time division multiplex system				
[NASA-CASE-XGS-05918]	c07 N69-39974	Wide range linear fluxgate magnetometer Patent	[NASA-CASE-XGS-01587]	c14 N71-15962
Doppler frequency spread correction device for multiplex transmissions				
[NASA-CASE-XGS-02749]	c07 N69-39978	Low friction magnetic recording tape Patent	[NASA-CASE-XGS-00373]	c23 N71-15978
Alkali-metal silicate protective coating				
[NASA-CASE-XGS-04119]	c18 N69-39979	Method for etching copper Patent	[NASA-CASE-XGS-06306]	c17 N71-16044
Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope				
[NASA-CASE-XGS-01725]	c14 N69-39982	Bacteriostatic conformal coating and methods of application Patent	[NASA-CASE-GSC-10007]	c18 N71-16046
Light sensitive digital aspect sensor Patent				
[NASA-CASE-XGS-00359]	c14 N70-34158	Serrodyne frequency converter re-entrant amplifier system Patent	[NASA-CASE-XGS-01022]	c07 N71-16088
Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent				
[NASA-CASE-XGS-00466]	c21 N70-34297	Position location and data collection system and method Patent	[NASA-CASE-GSC-10083-1]	c30 N71-16090
Binary magnetic memory device Patent				
[NASA-CASE-XGS-00174]	c08 N70-34743	Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent	[NASA-CASE-XGS-07514]	c23 N71-16099
Full binary adder Patent				
[NASA-CASE-XGS-00689]	c08 N70-34787	Optical tracker having overlapping reticles on parallel axes Patent	[NASA-CASE-XGS-05715]	c23 N71-16100
Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent				
[NASA-CASE-XGS-00381]	c09 N70-34819	Self-erecting reflector Patent	[NASA-CASE-XGS-09190]	c31 N71-16102
Space and atmospheric reentry vehicle Patent				
[NASA-CASE-XGS-00260]	c31 N70-37924	Dust particle injector for hypervelocity accelerators Patent	[NASA-CASE-XGS-06628]	c24 N71-16213
Variable frequency magnetic multivibrator Patent				
[NASA-CASE-XGS-00458]	c09 N70-38604	Ellipsoidal mirror reflectometer including means for averaging the radiation reflected from the sample Patent	[NASA-CASE-XGS-05291]	c23 N71-16341
Switching mechanism with energy storage means Patent				
[NASA-CASE-XGS-00473]	c03 N70-38713	Angular position and velocity sensing apparatus Patent	[NASA-CASE-XGS-05680]	c14 N71-17585
Variable frequency magnetic multivibrator Patent				
[NASA-CASE-XGS-00131]	c09 N70-38995	Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent	[NASA-CASE-XGS-03532]	c14 N71-17627
Stretch de-spin mechanism Patent				
[NASA-CASE-XGS-00619]	c30 N70-40016	Omni-directional anisotropic molecular trap Patent	[NASA-CASE-XGS-00783]	c30 N71-17788
Folding boom assembly Patent				
[NASA-CASE-XGS-00938]	c32 N70-41367			
Cryogenic connector for vacuum use Patent				
[NASA-CASE-XGS-02441]	c15 N70-41629			
Endless tape cartridge Patent				
[NASA-CASE-XGS-00769]	c14 N70-41647			
Apparatus for producing three-dimensional recordings of fluorescence spectra Patent				
[NASA-CASE-XGS-01231]	c14 N70-41676			



Method of making tubes Patent  
[NASA-CASE-XGS-04175] c15 N71-18579

Pulse-type magnetic core memory element circuit with blocking oscillator feedback Patent  
[NASA-CASE-XGS-03303] c08 N71-18595

Ripple add and ripple subtract binary counters Patent  
[NASA-CASE-XGS-04766] c08 N71-18602

Computing apparatus Patent  
[NASA-CASE-XGS-04765] c08 N71-18693

Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c10 N71-18772

Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c02 N71-19287

Apparatus for measuring current flow Patent  
[NASA-CASE-XGS-02439] c14 N71-19431

Synchronous counter Patent  
[NASA-CASE-XGS-02440] c08 N71-19432

Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c08 N71-19435

Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c08 N71-19437

Method and apparatus for battery charge control Patent  
[NASA-CASE-XGS-05432] c03 N71-19438

Stable amplifier having a stable quiescent point Patent  
[NASA-CASE-XGS-02812] c09 N71-19466

Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c07 N71-19854

Electrochemical coulometer and method of forming same Patent  
[NASA-CASE-XGS-05434] c03 N71-20491

Display for binary characters Patent  
[NASA-CASE-XGS-04987] c08 N71-20571

Amplifier clamping circuit for horizon scanner Patent  
[NASA-CASE-XGS-01784] c10 N71-20782

Diversity receiving system with diversity phase lock Patent  
[NASA-CASE-XGS-01222] c10 N71-20841

Signal detection and tracking apparatus Patent  
[NASA-CASE-XGS-03502] c10 N71-20852

Polarization diversity monopulse tracking receiver Patent  
[NASA-CASE-XGS-03501] c09 N71-20864

System for recording and reproducing pulse code modulated data Patent  
[NASA-CASE-XGS-01021] c08 N71-21042

Satellite appendage tie down cord Patent  
[NASA-CASE-XGS-02554] c11 N71-21064

Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c14 N71-21082

Nonmagnetic, explosive actuated indexing device Patent  
[NASA-CASE-XGS-02422] c15 N71-21529

Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c15 N71-21744

Conforming polisher for aspheric surface of revolution Patent  
[NASA-CASE-XGS-02884] c15 N71-22705

Precision thrust gage Patent  
[NASA-CASE-XGS-02319] c14 N71-22965

Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c03 N71-22974

Rotary bead dropper and selector for testing micrometeorite detectors Patent  
[NASA-CASE-XGS-03304] c09 N71-22988

Moment of inertia test fixture Patent  
[NASA-CASE-XGS-01023] c14 N71-22992

Fluid flow meter with comparator reference means Patent  
[NASA-CASE-XGS-01331] c14 N71-22996

Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c18 N71-22998

Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c07 N71-23001

Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c03 N71-23006

Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent  
[NASA-CASE-XGS-02607] c31 N71-23009

Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c09 N71-23015

Solid state pulse generator with constant output width, for variable input width, in nanosecond range Patent  
[NASA-CASE-XGS-03427] c10 N71-23029

Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c14 N71-23174

Solar cell and circuit array and process for nullifying magnetic fields Patent  
[NASA-CASE-XGS-03390] c03 N71-23187

Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c09 N71-23311

Sealed electrochemical cell provided with a flexible casing Patent  
[NASA-CASE-XGS-01513] c03 N71-23336

Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c09 N71-23525

Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c09 N71-23573

Apparatus for phase stability determination Patent  
[NASA-CASE-XGS-01118] c10 N71-23662

Tape recorder Patent  
[NASA-CASE-XGS-08259] c14 N71-23698

Balance torque meter Patent  
[NASA-CASE-XGS-01013] c14 N71-23725

Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c15 N71-24045

Selective plating of etched circuits without removing previous plating Patent  
[NASA-CASE-XGS-03120] c15 N71-24047

Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c18 N71-24183

Strain gauge measuring techniques Patent  
[NASA-CASE-XGS-04478] c14 N71-24233

Electromagnetic polarization systems and methods Patent  
[NASA-CASE-GSC-10021-1] c09 N71-24595

Redundant actuating mechanism Patent  
[NASA-CASE-XGS-08718] c15 N71-24600

Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c07 N71-24621

Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c07 N71-24624

Coulometer and third electrode battery charging circuit Patent  
[NASA-CASE-GSC-10487-1] c03 N71-24719

Electronic scanning of 2-channel monopulse patterns Patent  
[NASA-CASE-GSC-10299-1] c09 N71-24804

Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c28 N71-25213

Voltage to frequency converter Patent  
[NASA-CASE-GSC-10022-1] c10 N71-25882

Direct current motor with stationary armature and field Patent  
[NASA-CASE-XGS-05290] c09 N71-25999

Buck boost voltage regulation circuit Patent  
[NASA-CASE-GSC-10735-1] c10 N71-26085

Adaptive system and method for signal generation Patent  
[NASA-CASE-GSC-11367] c10 N71-26374

Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c10 N71-26418

Turn on transient limiter Patent  
[NASA-CASE-GSC-10413] c10 N71-26531

Voltage regulator with plural parallel power source sections Patent  
[NASA-CASE-GSC-10891-1] c10 N71-26626

Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c19 N71-26674

Resettable monostable pulse generator Patent  
[NASA-CASE-GSC-11139] c09 N71-27016

Micro-pound extended range thrust stand Patent  
[NASA-CASE-GSC-10710-1] c28 N71-27094

Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c10 N71-27136

Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c07 N71-27233

Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c21 N71-27324

Segmented superconducting magnet for a broadband traveling wave maser Patent  
[NASA-CASE-XGS-10518] c16 N71-28554

Millimeter wave antenna system Patent Application  
[NASA-CASE-GSC-10949-1] c07 N71-28965

Sampled data controller Patent [NASA-CASE-GSC-10554-1]	c08 N71-29033	Diffuse reflective coating [NASA-CASE-GSC-11214-1]	c06 N73-13128
Variable digital processor including a register for shifting and rotating bits in either direction Patent [NASA-CASE-GSC-10186]	c08 N71-33110	Data processor with conditionally supplied clock signals [NASA-CASE-GSC-10975-1]	c08 N73-13187
Combustion products generating and metering device [NASA-CASE-GSC-11095-1]	c14 N72-10375	Apparatus for vibrational testing of articles [NASA-CASE-GSC-11302-1]	c14 N73-13416
Analog spatial maneuver computer [NASA-CASE-GSC-10880-1]	c08 N72-11172	Method and system for ejecting fairing sections from a rocket vehicle [NASA-CASE-GSC-10590-1]	c31 N73-14853
Helical recorder arrangement for multiple channel recording on both sides of the tape [NASA-CASE-GSC-10614-1]	c09 N72-11224	Plural beam antenna [NASA-CASE-GSC-11013-1]	c09 N73-19234
Method and apparatus for eliminating noise in a coherent energy imaging system without destroying spatial coherence [NASA-CASE-GSC-11133-1]	c23 N72-11568	Star tracking reticles and process for the production thereof [NASA-CASE-GSC-11188-2]	c21 N73-19630
Position location system and method [NASA-CASE-GSC-10087-3]	c07 N72-12080	Delayed simultaneous release mechanism [NASA-CASE-GSC-10814-1]	c03 N73-20039
Facsimile video remodulation network [NASA-CASE-GSC-10185-1]	c07 N72-12081	Doppler compensation by shifting transmitted object frequency within limits [NASA-CASE-GSC-10087-4]	c07 N73-20174
Frangible electrochemical cell [NASA-CASE-XGS-10010]	c03 N72-15986	Signal-to-noise ratio determination circuit [NASA-CASE-GSC-11239-1]	c10 N73-25241
Caterpillar micro positicner [NASA-CASE-GSC-10780-1]	c14 N72-16283	Mutation damper [NASA-CASE-GSC-11205-1]	c15 N73-25513
Minimech self-deploying boom mechanism [NASA-CASE-GSC-10566-1]	c15 N72-18477	Low outgassing polydimethylsiloxane material and preparation thereof [NASA-CASE-GSC-11358-1]	c06 N73-26100
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Optimum performance spacecraft solar cell system [NASA-CASE-GSC-10669-1]	c03 N72-20031	Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves [NASA-CASE-GSC-10225-1]	c06 N73-27086
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Cosmic dust sensor [NASA-CASE-GSC-10503-1]	c14 N72-20381	Fastener stretcher [NASA-CASE-GSC-11149-1]	c15 N73-30457
Solenoid valve including guide for armature and valve member [NASA-CASE-GSC-10607-1]	c15 N72-20442	Spacecraft attitude sensor [NASA-CASE-GSC-10890-1]	c21 N73-30640
Fast response low power drain logic circuits [NASA-CASE-GSC-10878-1]	c10 N72-22236	Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions [NASA-CASE-GSC-11169-2]	c05 N73-32011
Trap for preventing diffusion pump backstreaming [NASA-CASE-GSC-10518-1]	c15 N72-22489	Star tracking reticles [NASA-CASE-GSC-11188-1]	c14 N73-32320
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Honeycomb core structures of minimal surface tubule sections [NASA-CASE-ERC-10363]	c18 N72-25541	Long range laser traversing system [NASA-CASE-GSC-11262-1]	c36 N74-21091
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Electric motive machine including magnetic bearing [NASA-CASE-XGS-07805]	c15 N72-33476	Coaxial anode wire for gas radiation counters [NASA-CASE-GSC-11492-1]	c35 N74-26949
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[NASA-CASE-GSC-11434-1]	c34	N74-27859
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[NASA-CASE-GSC-11445-1]	c31	N74-27902
Passive dual spin misalignment compensators		
[NASA-CASE-GSC-11479-1]	c35	N74-28097
Star scanner		
[NASA-CASE-GSC-11569-1]	c89	N74-30886
Millimeter wave pumped parametric amplifier		
[NASA-CASE-GSC-11617-1]	c33	N74-32660
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[NASA-CASE-GSC-11619-1]	c34	N75-12222
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[NASA-CASE-GSC-11760-1]	c33	N75-19516
X-Y alphanumeric character generator for		
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[NASA-CASE-GSC-11582-1]	c33	N75-19517
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[NASA-CASE-GSC-11844-1]	c33	N75-19522
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[NASA-CASE-GSC-11127-1]	c09	N75-24758
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[NASA-CASE-GSC-11623-1]	c33	N75-25040
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Process for making sheets with parallel pores of		
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[NASA-CASE-GSC-10984-1]	c37	N75-26371
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[NASA-CASE-GSC-11829-1]	c35	N75-27331
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[NASA-CASE-GSC-11968-1]	c32	N76-15329
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[NASA-CASE-GSC-11892-1]	c35	N76-15433
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[NASA-CASE-GSC-11895-1]	c35	N76-15436
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[NASA-CASE-GSC-11849-1]	c33	N76-16332
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[NASA-CASE-GSC-11889-1]	c35	N76-16393
Variable beamwidth antenna		
[NASA-CASE-GSC-11862-1]	c32	N76-18295
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[NASA-CASE-GSC-11925-1]	c33	N76-18353
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[NASA-CASE-GSC-11551-1]	c37	N76-18459
Apparatus for simulating optical transmission		
links		
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[NASA-CASE-XMS-02744] c33 N75-27249

Apparatus for welding sheet material  
[NASA-CASE-XMS-01330] c37 N75-27376

Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c54 N75-27759

Thrust measurement  
[NASA-CASE-XMS-05731] c35 N75-29382

Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c35 N75-30504

Filter regeneration systems  
[NASA-CASE-MSC-14273-1] c34 N75-33342

Spacecraft docking and alignment system  
[NASA-CASE-MSC-12559-1] c18 N76-14186

Reconstituted asbestos matrix  
[NASA-CASE-MSC-12568-1] c24 N76-14204

Strain arrestor plate for fused silica tile  
[NASA-CASE-MSC-14182-1] c27 N76-14264

Medical subject monitoring systems  
[NASA-CASE-MSC-14180-1] c52 N76-14757

Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c54 N76-14804

Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c12 N76-15189

Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c35 N76-15431

Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c32 N76-16249

Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c33 N76-16331

Space vehicle system  
[NASA-CASE-MSC-12561-1] c18 N76-17185

Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MSC-14435-1] c37 N76-18455

Auger attachment method for insulation  
[NASA-CASE-MSC-12615-1] c37 N76-19437

Position determination systems  
[NASA-CASE-MSC-12593-1] c17 N76-21250

Two-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-1] c27 N76-22377

Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c27 N76-23426

Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c60 N76-23850

Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c27 N76-24405

Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c54 N76-24200

Sun angle calculator  
[NASA-CASE-MSC-12617-1] c35 N76-29552

Meteoroid capture cell construction  
[NASA-CASE-MSC-12423-1] c91 N76-30131

Flanged major modular assembly jig  
[NASA-CASE-MSC-19372-1] c39 N76-31562

Optical noise suppression device and method  
[NASA-CASE-MSC-12640-1] c74 N76-31998

Optical process for producing classification maps from multispectral data  
[NASA-CASE-MSC-14472-1] c43 N77-10584

Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c74 N77-10899

Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c32 N77-12239

Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c52 N77-14737

Analysis of volatile organic compounds  
[NASA-CASE-MSC-14428-1] c23 N77-17161

System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c74 N77-18893

Fluid mass sensor for a zero gravity environment  
[NASA-CASE-MSC-14653-1] c35 N77-19385

Mechanical sequencer  
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Unbalanced quadriphase demodulator [NASA-CASE-MSC-14840-1]	c32 N77-24331	Length mode piezoelectric ultrasonic transducer for inspection of solid objects [NASA-CASE-MSC-19672-1]	c38 N79-14398
Open loop digital frequency multiplier [NASA-CASE-MSC-12709-1]	c33 N77-24375	Interactive color display for multispectral imagery using correlation clustering [NASA-CASE-MSC-16253-1]	c32 N79-20297
Platinum resistance thermometer circuit [NASA-CASE-MSC-12327-1]	c35 N77-27368	Sequencing device utilizing planetary gear set [NASA-CASE-MSC-19514-1]	c37 N79-20377
Surface finishing [NASA-CASE-MSC-12631-1]	c24 N77-28225	Water separator [NASA-CASE-MSC-01295-1]	c37 N79-21345
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Snap-in compressible biomedical electrode [NASA-CASE-MSC-14623-1]	c52 N77-28717	Diced tile thermal protection for spacecraft [NASA-CASE-MSC-16366-1]	c24 N79-23142
Load regulating latch [NASA-CASE-MSC-19535-1]	c37 N77-32499	Fluid sample collection and distribution system [NASA-CASE-MSC-16841-1]	c34 N79-24285
Regenerable device for scrubbing breathable air of CO <sub>2</sub> and moisture without special heat exchanger equipment [NASA-CASE-MSC-14771-1]	c54 N77-32722	Thermal insulation protection means [NASA-CASE-MSC-12737-1]	c24 N79-25142
Process of forming catalytic surfaces for wet oxidation reactions [NASA-CASE-MSC-14831-1]	c25 N78-10225	System for automatically switching transformer coupled lines [NASA-CASE-MSC-16697-1]	c33 N79-28415
Hearing aid malfunction detection system [NASA-CASE-MSC-14916-1]	c33 N78-10375	Fused switch [NASA-CASE-MSC-01244-1]	c33 N79-33393
Gas compression apparatus [NASA-CASE-MSC-14757-1]	c35 N78-10428	Chassis unit insert tightening-extract device [NASA-CASE-MSC-01077-1]	c37 N79-33467
Low gravity phase separator [NASA-CASE-MSC-14773-1]	c35 N78-12390	Compound oxidized styrylphosphine [NASA-CASE-MSC-14903-2]	c27 N80-10358
Iodine generator for reclaimed water purification [NASA-CASE-MSC-14632-1]	c54 N78-14784	Portable breathing system [NASA-CASE-MSC-16182-1]	c54 N80-10799
Flame retardant spandex type polyurethanes [NASA-CASE-MSC-14331-2]	c27 N78-17213	Method and apparatus for eliminating luminol interference material [NASA-CASE-MSC-16260-1]	c51 N80-16714
Temperature compensated current source [NASA-CASE-MSC-11235]	c33 N78-17294	Pressure limiting propellant actuating system [NASA-CASE-MSC-18179-1]	c20 N80-18097
Microbalance [NASA-CASE-MSC-11242]	c35 N78-17358	Method of forming dynamic membrane on stainless steel support [NASA-CASE-MSC-18172-1]	c26 N80-19237
Adjustable securing base [NASA-CASE-MSC-19666-1]	c37 N78-17383	Open ended ratchet type tubing cutter [NASA-CASE-MSC-18538-1]	c37 N80-22703
Restraining mechanism [NASA-CASE-MSC-13054]	c54 N78-17677	Floating nut retention system [NASA-CASE-MSC-16938-1]	c37 N80-23653
Helmet latching and attaching ring [NASA-CASE-MSC-04670]	c54 N78-17678	Heat resistant polymers of oxidized styrylphosphine [NASA-CASE-MSC-14903-3]	c27 N80-24438
Protective garment ventilation system [NASA-CASE-MSC-04928]	c54 N78-17679	Violet process for producing flame resistant polyamides and products produced thereby [NASA-CASE-MSC-16074-1]	c27 N80-26446
Helmet feedport [NASA-CASE-MSC-09653]	c54 N78-17680	Method and automated apparatus for detecting coliform organisms [NASA-CASE-MSC-16777-1]	c51 N80-27067
Optical conversion method [NASA-CASE-MSC-12618-1]	c74 N78-17865	Complementary cross-slot phased array antenna [NASA-CASE-MSC-18532-1]	c32 N80-29543
Emergency space-suit helmet [NASA-CASE-MSC-10954-1]	c54 N78-18761	Reconfiguring redundancy management [NASA-CASE-MSC-18498-1]	c60 N80-30050
Method of producing complex aluminum alloy parts of high temper, and products thereof [NASA-CASE-MSC-19693-1]	c26 N78-24333	Multiple band circularly polarized microstrip antenna [NASA-CASE-MSC-18334-1]	c32 N80-32604
Stator rotor tools [NASA-CASE-MSC-16000-1]	c37 N78-24544	Multispectral scanner optical system [NASA-CASE-MSC-18255-1]	c74 N80-33210
Flexible pile thermal barrier insulator [NASA-CASE-MSC-19568-1]	c34 N78-25350	Surface finishing [NASA-CASE-MSC-12631-3]	c27 N81-14077
Fluid valve assembly [NASA-CASE-MSC-12731-1]	c37 N78-25426	Coaxial phased array antenna [NASA-CASE-MSC-16800-1]	c32 N81-14187
Variable contour securing system [NASA-CASE-MSC-16270-1]	c37 N78-27423	Installing fiber insulation [NASA-CASE-MSC-16973-1]	c37 N81-14317
Urine collection device [NASA-CASE-MSC-16433-1]	c52 N78-27750	Pseudonoise code tracking loop [NASA-CASE-MSC-18035-1]	c32 N81-15179
Multi-purpose wind tunnel reaction control model block [NASA-CASE-MSC-19706-1]	c09 N78-31129	Thermal barrier pressure seal [NASA-CASE-MSC-18134-1]	c37 N81-15363
Heat resistant polymers of oxidized styrylphosphine [NASA-CASE-MSC-14903-1]	c27 N78-32256	Kinesimetric method and apparatus [NASA-CASE-MSC-18929-1]	c54 N81-15699
Condition sensor system and method [NASA-CASE-MSC-14805-1]	c54 N78-32720	Optical crystal temperature gauge with fiber optic connections [NASA-CASE-MSC-18627-1]	c74 N81-15818
Bit error rate measurement above and below bit rate tracking threshold [NASA-CASE-MSC-12743-1]	c32 N79-10263	Improved attachment system for silica tiles [NASA-CASE-MSC-18741-1]	c16 N81-16110
Phased array antenna control [NASA-CASE-MSC-14939-1]	c32 N79-11264	Absorbent product and articles made therefrom [NASA-CASE-MSC-18223-1]	c24 N81-16127
Apparatus and method for stabilized phase detection for binary signal tracking loops [NASA-CASE-MSC-16461-1]	c33 N79-11313	Receiving and tracking phase modulated signals [NASA-CASE-MSC-16170-2]	c32 N81-16338
Positive isolation disconnect [NASA-CASE-MSC-16043-1]	c37 N79-11402	Digital numerically controlled oscillator [NASA-CASE-MSC-16747-1]	c33 N81-17349
Thermal insulation attaching means [NASA-CASE-MSC-12619-2]	c27 N79-12221	Self-calibrating threshold detector [NASA-CASE-MSC-16370-1]	c35 N81-19427
Lightweight electrically-powered flexible thermal laminate [NASA-CASE-MSC-12662-1]	c33 N79-12331	Satellite retrieval system [NASA-CASE-MSC-25403-1]	c18 N81-24164
Simultaneous treatment of SO <sub>2</sub> containing stack gases and waste water [NASA-CASE-MSC-16258-1]	c45 N79-12584	Cell and method for electrolysis of water and anode	



[NASA-CASE-MSC-16394-1]	c28 N81-24280	[NASA-CASE-XKS-10543]	c07 N71-26292
A gas-to-hydraulic power converter		Internal work light Patent	
[NASA-CASE-MSC-18794-1]	c37 N81-24445	[NASA-CASE-XKS-05932]	c09 N71-26787
Apparatus for accurately preloading auger attachment means for frangible protective material		Emergency escape system Patent	
[NASA-CASE-MSC-18791-1]	c37 N81-24446	[NASA-CASE-XKS-07814]	c15 N71-27067
Compression test fixture		Voltage dropout sensor Patent	
[NASA-CASE-MSC-18723-1]	c39 N81-24470	[NASA-CASE-KSC-10020]	c10 N71-27338
Urine collection device		Autoignition test cell Patent	
[NASA-CASE-MSC-16433-1]	c52 N81-24711	[NASA-CASE-KSC-10198]	c11 N71-28629
Apparatus for determining changes in limb volume		Protective suit having an audio transceiver Patent	
[NASA-CASE-MSC-18759-1]	c52 N81-24716	[NASA-CASE-KSC-10164]	c07 N71-33108
Biomedical flow sensor		Ripple indicator	
[NASA-CASE-MSC-18761-1]	c52 N81-24717	[NASA-CASE-KSC-10162]	c09 N72-11225
Apparatus for fiber optic liquid level sensing		High speed photo-optical time recording	
[NASA-CASE-MSC-18674-1]	c74 N81-24907	[NASA-CASE-KSC-10294]	c14 N72-18411
Method for applying photographic resists to otherwise incompatible substrates		High speed direct binary-to-binary coded decimal converter	
[NASA-CASE-MSC-18107-1]	c27 N81-25209	[NASA-CASE-KSC-10326]	c08 N72-21197
Structural members, method and apparatus		Automatic frequency control loop including synchronous switching circuits	
[NASA-CASE-MSC-16217-1]	c31 N81-27323	[NASA-CASE-KSC-10393]	c09 N72-21247
Shielded conductor cable system		Zero gravity shadow shield aligner	
[NASA-CASE-MSC-12745-1]	c33 N81-27397	[NASA-CASE-KSC-10622-1]	c31 N72-21893
Urine collection apparatus		Universal environment package with sectional component housing	
[NASA-CASE-MSC-18381-1]	c52 N81-28740	[NASA-CASE-KSC-10031]	c15 N72-22486
Densification of porous refractory substrates		Buffered analog converter	
[NASA-CASE-MSC-18737-1]	c25 N81-25180	[NASA-CASE-KSC-10397]	c08 N72-25206
Method of repairing surface damage to porous refractory substrates		Lamp modulator	
[NASA-CASE-MSC-18736-1]	c27 N81-25231	[NASA-CASE-KSC-10565]	c09 N72-25250
Doppler radar having phase modulation of both transmitted and reflected return signals		Cable stabilizer for open shaft cable operated elevators	
[NASA-CASE-MSC-18675-1]	c32 N81-29312	[NASA-CASE-KSC-10513]	c15 N72-25453
Automatic compression adjusting mechanism for internal combustion engines		Pressurized lighting system	
[NASA-CASE-MSC-18807-1]	c37 N81-29442	[NASA-CASE-KSC-10644]	c09 N72-27227
Reciprocating engines		High speed direct binary to binary coded decimal converter and scaler	
[NASA-CASE-MSC-16239-1]	c37 N81-32510	[NASA-CASE-KSC-10595]	c08 N73-12176
Cavity-backed, micro-strip dipole antenna array		Geysering inhibitor for vertical cryogenic transfer pipe	
[NASA-CASE-MSC-18606-1]	c32 N82-11336	[NASA-CASE-KSC-10615]	c15 N73-12486
Low temperature latching solenoid		Electronic video editor	
[NASA-CASE-MSC-18106-1]	c33 N82-11357	[NASA-CASE-KSC-10003]	c10 N73-13235
Logic-controlled occlusive cuff system		Collapsible high gain antenna	
[NASA-CASE-MSC-14836-1]	c52 N82-11770	[NASA-CASE-KSC-10392]	c07 N73-26117
Electrophotolysis oxidation system for measurement of organic concentration in water		Floating baffle to improve efficiency of liquid transfer from tanks	
[NASA-CASE-MSC-16497-1]	c25 N82-12166	[NASA-CASE-KSC-10639]	c15 N73-26472
<b>NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. JOHN F. KENNEDY SPACE CENTER, COCOA BEACH, FLA.</b>		Zero gravity liquid transfer screen	
Device for determining the accuracy of the flare on a flared tube		[NASA-CASE-KSC-10626]	c14 N73-27378
[NASA-CASE-XKS-03495]	c14 N69-39785	Television multiplexing system	
Quick attach and release fluid coupling assembly Patent		[NASA-CASE-KSC-10654-1]	c07 N73-30115
[NASA-CASE-XKS-01985]	c15 N71-10782	Lightning tracking system	
Parasitic probe antenna Patent		[NASA-CASE-KSC-10729-1]	c09 N73-32110
[NASA-CASE-XKS-09348]	c09 N71-13521	Rocket borne instrument to measure electric fields inside electrified clouds	
Electronic checkout system for space vehicles Patent		[NASA-CASE-KSC-10730-1]	c14 N73-32318
[NASA-CASE-XKS-08012-2]	c31 N71-15566	Electric field measuring and display system	
Apparatus for tensile testing Patent		[NASA-CASE-KSC-10731-1]	c33 N74-27862
[NASA-CASE-XKS-06250]	c14 N71-15600	Digital servo controller	
Weatherproof helix antenna Patent		[NASA-CASE-KSC-10769-1]	c33 N74-29556
[NASA-CASE-XKS-08485]	c07 N71-19493	Signal conditioner test set	
Valve seat with resilient support member Patent		[NASA-CASE-KSC-10750-1]	c35 N75-12270
[NASA-CASE-XKS-02582]	c15 N71-21234	Variable resistance constant tension and lubrication device	
Diode and protection fuse unit Patent		[NASA-CASE-KSC-10723-1]	c37 N75-13265
[NASA-CASE-XKS-03381]	c09 N71-22796	Voltage monitoring system	
Optical monitor panel Patent		[NASA-CASE-KSC-10736-1]	c33 N75-19521
[NASA-CASE-XKS-03509]	c14 N71-23175	Lightning current measuring systems	
Separation simulator Patent		[NASA-CASE-KSC-10807-1]	c33 N75-26246
[NASA-CASE-XKS-04631]	c10 N71-23663	Dual digital video switcher	
Controlled release device Patent		[NASA-CASE-KSC-10782-1]	c33 N75-30431
[NASA-CASE-XKS-03338]	c15 N71-24043	Compact-bi-phase pulse coded modulation decoder	
Phonocardiogram simulator Patent		[NASA-CASE-KSC-10834-1]	c33 N76-14371
[NASA-CASE-XKS-10804]	c05 N71-24606	Percutaneous connector device	
VHF/UHF parasitic probe antenna Patent		[NASA-CASE-KSC-10849-1]	c52 N77-14738
[NASA-CASE-XKS-09340]	c07 N71-24614	Magnetic electrical connectors for biomedical percutaneous implants	
BCD to decimal decoder Patent		[NASA-CASE-KSC-11030-1]	c52 N77-25772
[NASA-CASE-XKS-06167]	c08 N71-24890	Rotational joint assembly for the prosthetic leg	
Flammability test chamber Patent		[NASA-CASE-KSC-11004-1]	c54 N77-30749
[NASA-CASE-KSC-10126]	c11 N71-24985	Fiber optic multiplex optical transmission system	
Video sync processor Patent		[NASA-CASE-KSC-11047-1]	c74 N78-14889
[NASA-CASE-KSC-10002]	c10 N71-25865	Microcomputerized electric field meter diagnostic and calibration system	
Weld preparation machine Patent		[NASA-CASE-KSC-11035-1]	c35 N78-28411
[NASA-CASE-XKS-07953]	c15 N71-26134	Ocean thermal plant	
Validation device for spacecraft checkout equipment Patent		[NASA-CASE-KSC-11034-1]	c44 N78-32542



Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c33 N79-10337

Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315

Illumination control apparatus for compensating solar light  
[NASA-CASE-KSC-11010-1] c74 N79-12890

Lightning current detector  
[NASA-CASE-KSC-11057-1] c33 N79-14305

Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193

Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c33 N79-22373

Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c32 N79-23310

Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772

Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c32 N79-28383

Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c74 N81-12862

Fire extinguishing apparatus having a slidable mass for a penetrator nozzle  
[NASA-CASE-KSC-11064-1] c31 N81-14137

System for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c02 N81-14967

System for sterilizing objects  
[NASA-CASE-KSC-11085-1] c54 N81-24724

Common data buffer system  
[NASA-CASE-KSC-11048-1] c62 N81-24779

System and method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-2] c02 N81-26073

Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c33 N81-26359

Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c34 N81-26402

Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c33 N81-29347

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**LANGLEY RESEARCH CENTER, HAMPTON, VA.**

Jet shoes  
[NASA-CASE-XLA-08491] c05 N69-21380

Condenser - Separator  
[NASA-CASE-XLA-08645] c15 N69-21465

Connector - Electrical  
[NASA-CASE-XLA-01288] c09 N69-21470

A support technique for vertically oriented launch vehicles  
[NASA-CASE-XLA-02704] c11 N69-21540

Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c14 N69-27461

Evaporant holder  
[NASA-CASE-XLA-03105] c15 N69-27483

Compensating radiometer  
[NASA-CASE-XLA-04556] c14 N69-27484

Tubular coupling having frangible connecting means  
[NASA-CASE-XLA-02854] c15 N69-27490

Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c15 N69-27505

Ablation sensor  
[NASA-CASE-XLA-01781] c14 N69-35975

Aeroflexible structures  
[NASA-CASE-XLA-06055] c01 N69-39981

Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c09 N69-39984

Disk pack cleaning table Patent Application  
[NASA-CASE-LAB-10590-1] c15 N70-26819

Folding apparatus Patent  
[NASA-CASE-XLA-00137] c15 N70-33180

Infrared scanner Patent  
[NASA-CASE-XLA-00120] c21 N70-33181

Reentry vehicle leading edge Patent  
[NASA-CASE-XLA-00165] c31 N70-33242

Motion picture camera for optical pyrometry Patent  
[NASA-CASE-XLA-00062] c14 N70-33254

Variable sweep wing configuration Patent  
[NASA-CASE-XLA-00230] c02 N70-33255

Variable sweep wing aircraft Patent  
[NASA-CASE-XLA-00221] c02 N70-33266

Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c25 N70-33267

Survival couch Patent  
[NASA-CASE-XLA-00118] c05 N70-33285

Landing arrangement for aerial vehicles Patent  
[NASA-CASE-XLA-00142] c02 N70-33286

Wind tunnel airstream oscillating apparatus Patent  
[NASA-CASE-XLA-00112] c11 N70-33287

Hydrofoil Patent  
[NASA-CASE-XLA-00229] c12 N70-33305

High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c09 N70-33312

Particle detection apparatus Patent  
[NASA-CASE-XLA-00135] c14 N70-33322

Runway light Patent  
[NASA-CASE-XLA-00119] c11 N70-33329

Spherical solid-propellant rocket motor Patent  
[NASA-CASE-XLA-00105] c28 N70-33331

Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c02 N70-33332

Aerial capsule emergency separation device Patent  
[NASA-CASE-XLA-00115] c03 N70-33343

Nozzle Patent  
[NASA-CASE-XLA-00154] c28 N70-33374

Air frame drag balance Patent  
[NASA-CASE-XLA-00113] c14 N70-33386

Flexible foam erectable space structures Patent  
[NASA-CASE-XLA-00686] c31 N70-34135

Nose gear steering system for vehicle with main skids Patent  
[NASA-CASE-XLA-01804] c02 N70-34160

Surface roughness detector Patent  
[NASA-CASE-XLA-00203] c14 N70-34161

Variable-span aircraft Patent  
[NASA-CASE-XLA-00166] c02 N70-34178

Dynamic precession damper for spin stabilized vehicles Patent  
[NASA-CASE-XLA-01989] c21 N70-34295

Erectable modular space station Patent  
[NASA-CASE-XLA-00678] c31 N70-34296

Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c33 N70-34540

Ac power amplifier Patent Application  
[NASA-CASE-LAB-10218-1] c09 N70-34559

Method and apparatus for producing a plasma Patent  
[NASA-CASE-XLA-00147] c25 N70-34661

Gas actuated bolt disconnect Patent  
[NASA-CASE-XLA-00326] c03 N70-34667

Logarithmic converter Patent  
[NASA-CASE-XLA-00471] c08 N70-34778

Mandrel for shaping solid propellant rocket fuel into a motor casing Patent  
[NASA-CASE-XLA-00304] c27 N70-34783

Impact simulator Patent  
[NASA-CASE-XLA-00493] c11 N70-34786

Accelerometer with FM output Patent  
[NASA-CASE-XLA-00492] c14 N70-34799

Frangible tube energy dissipation Patent  
[NASA-CASE-XLA-00754] c15 N70-34850

Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c02 N70-34858

Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c15 N70-36409

Inflatable honeycomb Patent  
[NASA-CASE-XLA-00204] c32 N70-36536

Thermal control of space vehicles Patent  
[NASA-CASE-XLA-01291] c33 N70-36617

Foam generator Patent  
[NASA-CASE-XLA-00838] c03 N70-36778

Parachute glider Patent  
[NASA-CASE-XLA-00898] c02 N70-36804

Production of high purity silicon carbide Patent  
[NASA-CASE-XLA-00158] c26 N70-36805

Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c14 N70-36807

Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c14 N70-36824

Aircraft wheel spray drag alleviator Patent  
[NASA-CASE-XLA-01583] c02 N70-36825

Attitude orientation of spin-stabilized space vehicles Patent  
[NASA-CASE-XLA-00281] c21 N70-36943

Continuously operating induction plasma accelerator Patent  
[NASA-CASE-XLA-01354] c25 N70-36946

Check valve assembly for a probe Patent  
[NASA-CASE-XLA-00128] c15 N70-37925

Space capsule Patent  
[NASA-CASE-XLA-00149] c31 N70-37938

Sandwich panel construction Patent  
[NASA-CASE-XLA-00349] c33 N70-37979

Reflector space satellite Patent  
[NASA-CASE-XLA-00138] c31 N70-37981

Variable-geometry winged reentry vehicle Patent [NASA-CASE-XLA-00241]	c31 N70-37586	Process for interfacial polymerization of pyromellitic dianhydride and 1,2,4, 5-tetraamino-benzene Patent [NASA-CASE-XLA-03104]	c06 N71-11235
Vehicle parachute and equipment jettison system Patent [NASA-CASE-XLA-00195]	c02 N70-38009	Imidazopyrrolone/imide copolymers Patent [NASA-CASE-XLA-08802]	c06 N71-11238
Landing arrangement for aerospace vehicle Patent [NASA-CASE-XLA-00805]	c31 N70-38010	Adaptive compression of communication signals Patent [NASA-CASE-XLA-03076]	c07 N71-11266
Antenna system using parasitic elements and two driven elements at 90 deg angle fed 180 deg out of phase Patent [NASA-CASE-XLA-00414]	c07 N70-38200	Reentry communication by material addition Patent [NASA-CASE-XLA-01552]	c07 N71-11284
Despin weight release Patent [NASA-CASE-XLA-00679]	c15 N70-38601	Cooperative Doppler radar system Patent [NASA-CASE-LAR-10403]	c21 N71-11766
Manned space station Patent [NASA-CASE-XLA-00258]	c31 N70-38676	Supersonic aircraft Patent [NASA-CASE-XLA-04451]	c02 N71-12243
Missile stage separation indicator and stage initiator Patent [NASA-CASE-XLA-00791]	c03 N70-35930	Umbilical disconnect Patent [NASA-CASE-XLA-00711]	c03 N71-12258
Apparatus for producing high purity silicon carbide crystals Patent [NASA-CASE-XLA-02057]	c26 N70-40015	Remote controlled tubular disconnect Patent [NASA-CASE-XLA-01396]	c03 N71-12259
Miniature vibration isolator Patent [NASA-CASE-XLA-01019]	c15 N70-40156	Backpack carrier Patent [NASA-CASE-LAR-10056]	c05 N71-12351
Aircraft instrument Patent [NASA-CASE-XLA-00487]	c14 N70-40157	Optical communications system Patent [NASA-CASE-XLA-01090]	c07 N71-12389
Radiation direction detector including means for compensating for photocell aging Patent [NASA-CASE-XLA-00183]	c14 N70-40239	Analog to digital converter Patent [NASA-CASE-XLA-00670]	c08 N71-12501
Passive communication satellite Patent [NASA-CASE-XLA-00210]	c30 N70-40309	Integrated time shared instrumentation display Patent [NASA-CASE-XLA-01952]	c08 N71-12507
Electrostatic plasma modulator for space vehicle re-entry communication Patent [NASA-CASE-XLA-01400]	c07 N70-41331	SCR blocking pulse gate amplifier Patent [NASA-CASE-XLA-07497]	c09 N71-12514
Micrometeoroid velocity measuring device Patent [NASA-CASE-XLA-00495]	c14 N70-41332	Minimum induced drag airfoil body Patent [NASA-CASE-XLA-00755]	c01 N71-13410
Method of obtaining permanent record of surface flow phenomena Patent [NASA-CASE-XLA-01353]	c14 N70-41366	Minimum induced drag airfoil body Patent [NASA-CASE-XLA-05828]	c01 N71-13411
Means for communicating through a layer of ionized gases Patent [NASA-CASE-XLA-01127]	c07 N70-41372	Mechanical stability augmentation system Patent [NASA-CASE-XLA-06339]	c02 N71-13422
Quick release separation mechanism Patent [NASA-CASE-XLA-01441]	c15 N70-41679	Automatic balancing device Patent [NASA-CASE-LAR-10774]	c10 N71-13545
Flexible wing deployment device Patent [NASA-CASE-XLA-01220]	c02 N70-41863	Quick release connector Patent [NASA-CASE-XLA-01141]	c15 N71-13789
Self-sealing, unbonded, rocket motor nozzle closure Patent [NASA-CASE-XLA-02651]	c28 N70-41967	Spacecraft experiment pointing and attitude control system Patent [NASA-CASE-XLA-05464]	c21 N71-14132
Fatigue testing device Patent [NASA-CASE-XLA-02131]	c32 N70-42003	Pressurized cell micrometeoroid detector Patent [NASA-CASE-XLA-00936]	c14 N71-14996
Techniques for insulating cryogenic fuel containers Patent [NASA-CASE-XLA-01967]	c31 N70-42015	Crossed-field MHD plasma generator/accelerator Patent [NASA-CASE-XLA-03374]	c25 N71-15562
Double hinged flap Patent [NASA-CASE-XLA-01290]	c02 N70-42016	Adjustable attitude guide device Patent [NASA-CASE-XLA-07911]	c15 N71-15571
Spacecraft separation system for spinning vehicles and/or payloads Patent [NASA-CASE-XLA-02132]	c31 N71-10582	Control system for rocket vehicles Patent [NASA-CASE-XLA-01163]	c21 N71-15582
Method for molding compounds Patent [NASA-CASE-XLA-01091]	c15 N71-10672	Excessive temperature warning system Patent [NASA-CASE-XLA-01926]	c14 N71-15620
Automatic force measuring system Patent [NASA-CASE-XLA-02605]	c14 N71-10773	Alleviation of divergence during rocket launch Patent [NASA-CASE-XLA-00256]	c31 N71-15663
Gas analyzer for bi-gaseous mixtures Patent [NASA-CASE-XLA-01131]	c14 N71-10774	Space capsule Patent [NASA-CASE-XLA-01332]	c31 N71-15664
Multiple input radio receiver Patent [NASA-CASE-XLA-00901]	c07 N71-10775	Variable geometry manned orbital vehicle Patent [NASA-CASE-XLA-03691]	c31 N71-15674
Rotating space station simulator Patent [NASA-CASE-XLA-03127]	c11 N71-10776	Payload/burned-out motor case separation system Patent [NASA-CASE-XLA-05369]	c31 N71-15687
Composite powerplant and shroud therefor Patent [NASA-CASE-XLA-01043]	c28 N71-10780	Velocity package Patent [NASA-CASE-XLA-01339]	c31 N71-15692
All-directional fastener Patent [NASA-CASE-XLA-01807]	c15 N71-10799	File card marker Patent [NASA-CASE-XLA-02705]	c08 N71-15908
Hot air balloon deceleration and recovery system Patent [NASA-CASE-XLA-06824-2]	c02 N71-11037	Hypersonic test facility Patent [NASA-CASE-XLA-00378]	c11 N71-15925
Control for flexible parawing Patent [NASA-CASE-XLA-06958]	c02 N71-11038	Test unit free-flight suspension system Patent [NASA-CASE-XLA-00939]	c11 N71-15926
Variable sweep aircraft Patent [NASA-CASE-XLA-03659]	c02 N71-11041	Reduced gravity simulator Patent [NASA-CASE-XLA-01787]	c11 N71-16028
Translating horizontal tail Patent [NASA-CASE-XLA-08801-1]	c02 N71-11043	Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent [NASA-CASE-XLA-00284]	c15 N71-16075
Space suit pressure stabilizer Patent [NASA-CASE-XLA-05332]	c05 N71-11194	Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent [NASA-CASE-XLA-00302]	c15 N71-16077
Equipotential space suit Patent [NASA-CASE-LAR-10007-1]	c05 N71-11195	Separator Patent [NASA-CASE-XLA-00415]	c15 N71-16079
Recovery of potable water from human wastes in below-G conditions Patent [NASA-CASE-XLA-05213]	c05 N71-11207	Omnidirectional multiple impact landing system Patent [NASA-CASE-XLA-09881]	c31 N71-16085
		Flexible ring slosh damping baffle Patent [NASA-CASE-LAR-10317-1]	c32 N71-16103
		Buoyant anti-slosh system Patent [NASA-CASE-XLA-04605]	c32 N71-16106

Detector panels-micrometeoroid impact Patent		Method of making inflatable honeycomb Patent	
[NASA-CASE-XLA-05906]	c31 N71-16221	[NASA-CASE-XLA-03492]	c15 N71-22713
Wind velocity probing device and method Patent		Lunar penetrometer Patent	
[NASA-CASE-XLA-02081]	c20 N71-16281	[NASA-CASE-XLA-00934]	c14 N71-22765
Vibrating structure displacement measuring instrument Patent		Thermal control wall panel Patent	
[NASA-CASE-XLA-03135]	c32 N71-16428	[NASA-CASE-XLA-01243]	c33 N71-22792
Viscous-pendulum-damper Patent		Attitude sensor for space vehicles Patent	
[NASA-CASE-XLA-02079]	c12 N71-16894	[NASA-CASE-XLA-00793]	c21 N71-22880
Leak detector Patent		Omnidirectional microwave spacecraft antenna Patent	
[NASA-CASE-LAR-10323-1]	c12 N71-17573	[NASA-CASE-XLA-03114]	c09 N71-22888
Logic AND gate for fluid circuits Patent		Thermal control panel Patent	
[NASA-CASE-XLA-07391]	c12 N71-17579	[NASA-CASE-XLA-07728]	c33 N71-22890
Contour surveying system Patent		Spacecraft airlock Patent	
[NASA-CASE-XLA-08646]	c14 N71-17586	[NASA-CASE-XLA-02050]	c31 N71-22968
Cable arrangement for rigid tethering Patent		Station keeping of a gravity gradient stabilized satellite Patent	
[NASA-CASE-XLA-02332]	c32 N71-17609	[NASA-CASE-XLA-03132]	c31 N71-22969
Thermal pump-compressor for space use Patent		Semi-linear ball bearing Patent	
[NASA-CASE-XLA-00377]	c33 N71-17610	[NASA-CASE-XLA-02809]	c15 N71-22982
Viscous pendulum damper Patent		Heat sensing instrument Patent	
[NASA-CASE-LAR-10274-1]	c14 N71-17626	[NASA-CASE-XLA-01551]	c14 N71-22989
Self supporting space vehicle Patent		Ablation sensor Patent	
[NASA-CASE-XLA-00117]	c31 N71-17680	[NASA-CASE-XLA-01791]	c14 N71-22991
Technique for control of free-flight rocket vehicles Patent		Self-calibrating displacement transducer Patent	
[NASA-CASE-XLA-00937]	c31 N71-17691	[NASA-CASE-XLA-00781]	c09 N71-22999
Hydraulic grip Patent		Lateral displacement system for separated rocket stages Patent	
[NASA-CASE-XLA-05100]	c15 N71-17696	[NASA-CASE-XLA-04804]	c31 N71-23008
Heat protection apparatus Patent		Thermal control coating Patent	
[NASA-CASE-XLA-00892]	c33 N71-17897	[NASA-CASE-XLA-01995]	c18 N71-23047
Thermopile vacuum gage tube simulator Patent		Method of making an inflatable panel Patent	
[NASA-CASE-XLA-02758]	c14 N71-18481	[NASA-CASE-XLA-03497]	c15 N71-23052
Ionization vacuum gauge with all but the end of the ion collector shielded Patent		Variable duration pulse integrator Patent	
[NASA-CASE-XLA-07424]	c14 N71-18482	[NASA-CASE-XLA-01219]	c10 N71-23084
Safe-arm initiator Patent		Impact energy absorber Patent	
[NASA-CASE-LAR-10372]	c09 N71-18599	[NASA-CASE-XLA-01530]	c14 N71-23092
Controlled glass bead peening Patent		Micrometeoroid penetration measuring device Patent	
[NASA-CASE-XLA-07390]	c15 N71-18616	[NASA-CASE-XLA-00941]	c14 N71-23240
Exclusive-Or digital logic module Patent		Combined optical attitude and altitude indicating instrument Patent	
[NASA-CASE-XLA-07732]	c08 N71-18751	[NASA-CASE-XLA-01907]	c14 N71-23268
Slosh alleviator Patent		Solar sensor having coarse and fine sensing with matched preirradiated cells and method of selecting cells Patent	
[NASA-CASE-XLA-05749]	c15 N71-19569	[NASA-CASE-XLA-01584]	c14 N71-23269
G conditioning suit Patent		Variable width pulse integrator Patent	
[NASA-CASE-XLA-02898]	c05 N71-20268	[NASA-CASE-XLA-03356]	c10 N71-23315
Dosimeter for high levels of absorbed radiation Patent		Leading edge curvature based on convective heating Patent	
[NASA-CASE-XLA-03645]	c14 N71-20430	[NASA-CASE-XLA-01486]	c01 N71-23497
Flow field simulation Patent		Measurement of time differences between luminous events Patent	
[NASA-CASE-LAR-11138]	c12 N71-20436	[NASA-CASE-XLA-01987]	c23 N71-23976
Variable pulse width multiplier Patent		Method for measuring the characteristics of a gas Patent	
[NASA-CASE-XLA-02850]	c09 N71-20447	[NASA-CASE-XLA-03375]	c16 N71-24074
Means for measuring the electron density gradients of the plasma sheath formed around a space vehicle Patent		Laser grating interferometer Patent	
[NASA-CASE-XLA-06232]	c25 N71-20563	[NASA-CASE-XLA-04295]	c16 N71-24170
Null device for hand controller Patent		Automatic fatigue test temperature programmer Patent	
[NASA-CASE-XLA-01808]	c15 N71-20740	[NASA-CASE-XLA-02059]	c33 N71-24276
Event recorder Patent		Ring wing tension vehicle Patent	
[NASA-CASE-XLA-01832]	c14 N71-21006	[NASA-CASE-XLA-04901]	c31 N71-24315
Inflatable support structure Patent		Process for applying black coating to metals Patent	
[NASA-CASE-XLA-01731]	c32 N71-21045	[NASA-CASE-XLA-06199]	c15 N71-24875
Past opening diaphragm Patent		Velocity limiting safety system Patent	
[NASA-CASE-XLA-03660]	c15 N71-21060	[NASA-CASE-XLA-07473]	c15 N71-24895
Ellipsograph for pantograph Patent		Strain coupled servo control system Patent	
[NASA-CASE-XLA-03102]	c14 N71-21079	[NASA-CASE-XLA-08530]	c32 N71-25360
Random function tracer Patent		Method of temperature compensating semiconductor strain gages Patent	
[NASA-CASE-XLA-01401]	c15 N71-21179	[NASA-CASE-XLA-04555-1]	c14 N71-25892
Method and apparatus for bonding a plastics sleeve onto a metallic body Patent		Method for improving the signal-to-noise ratio of the Wheatstone bridge type bolometer Patent	
[NASA-CASE-XLA-01262]	c15 N71-21404	[NASA-CASE-XLA-02810]	c14 N71-25901
Hypersonic test facility Patent		Method of plating copper on aluminum Patent	
[NASA-CASE-XLA-05378]	c11 N71-21475	[NASA-CASE-XLA-08966-1]	c17 N71-25903
Multilegged support system Patent		Laser calibrator Patent	
[NASA-CASE-XLA-01326]	c11 N71-21481	[NASA-CASE-XLA-03410]	c16 N71-25914
Nacelle afterbody for jet engines Patent		Thermal protection ablation spray system Patent	
[NASA-CASE-XLA-10450]	c28 N71-21493	[NASA-CASE-XLA-04251]	c18 N71-26100
Canister closing device Patent		Direct lift control system Patent	
[NASA-CASE-XLA-01446]	c15 N71-21528	[NASA-CASE-LAR-10249-1]	c02 N71-26110
Ablation sensor Patent		Light shield and infrared reflector for fatigue testing Patent	
[NASA-CASE-XLA-01794]	c33 N71-21586	[NASA-CASE-XLA-01782]	c14 N71-26136
Self-repeating plasma generator having communicating annular and linear arc discharge passages Patent			
[NASA-CASE-XLA-03103]	c25 N71-21693		
Attitude control and damping system for spacecraft Patent			
[NASA-CASE-XLA-02551]	c21 N71-21708		

Dual resonant cavity absorption cell Patent		Electro-mechanical sine/cosine generator	
[NASA-CASE-LAR-10305]	c14 N71-26137	[NASA-CASE-LAR-10503-1]	c09 N72-21248
Resilience testing device Patent		Lathe tool bit and holder for machining	
[NASA-CASE-XLA-08254]	c14 N71-26161	fiberglass materials	
Precipitation detector Patent		[NASA-CASE-XLA-10470]	c15 N72-21489
[NASA-CASE-XLA-02619]	c10 N71-26334	Pressure operated electrical switch responsive	
Instrument for measuring the dynamic behavior of		to a pressure decrease after a pressure increase	
liquids Patent		[NASA-CASE-LAR-10137-1]	c09 N72-22204
[NASA-CASE-XLA-05541]	c12 N71-26387	Variable geometry wind tunnels	
Arbitrarily shaped model survey system Patent		[NASA-CASE-XLA-07430]	c11 N72-22246
[NASA-CASE-LAR-10098]	c32 N71-26681	Magnifying scratch gage force transducer	
Dielectric molding apparatus Patent		[NASA-CASE-LAR-10496-1]	c14 N72-22437
[NASA-CASE-LAR-10121-1]	c15 N71-26721	Star image motion compensator	
Method of making a solid propellant rocket motor		[NASA-CASE-LAR-10523-1]	c14 N72-22444
Patent		Absolute focus lock for microscopes	
[NASA-CASE-XLA-04126]	c28 N71-26779	[NASA-CASE-LAR-10184]	c14 N72-22445
Dynamic vibration absorber Patent		Cryogenic feedthrough	
[NASA-CASE-LAR-10083-1]	c15 N71-27006	[NASA-CASE-LAR-10031]	c15 N72-22484
Rate augmented digital to analog converter Patent		A technique for breaking ice in the path of a ship	
[NASA-CASE-XLA-07828]	c08 N71-27057	[NASA-CASE-LAR-10815-1]	c16 N72-22520
High speed flight vehicle control Patent		One hand backpack harness	
[NASA-CASE-XLA-08967]	c02 N71-27088	[NASA-CASE-LAR-10102-1]	c05 N72-23085
Suspended mass impact damper Patent		Method and apparatus for mapping the sensitivity	
[NASA-CASE-LAR-10193-1]	c15 N71-27146	of the face of a photodetector specifically a	
Active vibration isolator for flexible bodies		PMT	
Patent		[NASA-CASE-LAR-10320-1]	c09 N72-23172
[NASA-CASE-LAR-10106-1]	c15 N71-27169	Omnidirectional slot antenna for mounting on	
Soldering device Patent		cylindrical space vehicle	
[NASA-CASE-XLA-08911]	c15 N71-27214	[NASA-CASE-LAR-10163-1]	c09 N72-25247
Fringe counter for interferometers Patent		Hall effect transducer	
[NASA-CASE-LAR-10204]	c14 N71-27215	[NASA-CASE-LAR-10620-1]	c09 N72-25255
Wideband VCO with high phase stability Patent		Radio frequency filter device	
[NASA-CASE-XLA-03893]	c10 N71-27271	[NASA-CASE-XLA-02609]	c09 N72-25256
Plural position switch status and operativeness		Parametric amplifiers with idler circuit feedback	
checker Patent		[NASA-CASE-LAR-10253-1]	c09 N72-25258
[NASA-CASE-XLA-08799]	c10 N71-27272	Variable angle tube holder	
Angular displacement indicating gas bearing		[NASA-CASE-LAR-10507-1]	c11 N72-25284
support system Patent		Low mass truss structure	
[NASA-CASE-XLA-09346]	c15 N71-28740	[NASA-CASE-LAR-10546-1]	c11 N72-25287
Solid state thermal control polymer coating		Liquid waste feed system	
Patent		[NASA-CASE-LAR-10365-1]	c05 N72-27102
[NASA-CASE-XLA-01745]	c33 N71-28903	Microcircuit negative cutter	
Specialized halogen generator for purification		[NASA-CASE-XLA-09843]	c15 N72-27485
of water Patent		Light regulator	
[NASA-CASE-XLA-08913]	c14 N71-28933	[NASA-CASE-LAR-10836-1]	c26 N72-27784
Optical communications system Patent		Linear explosive comparison	
[NASA-CASE-XLA-01090]	c16 N71-28963	[NASA-CASE-LAR-10800-1]	c33 N72-27959
Antenna design for surface wave suppression Patent		Spherical measurement device	
[NASA-CASE-XLA-10772]	c07 N71-28980	[NASA-CASE-XLA-06683]	c14 N72-28436
Analog to digital converter tester Patent		Method of making semiconductor p-n junction	
[NASA-CASE-XLA-06713]	c14 N71-28991	stress and strain sensor	
Method of making pressurized panel Patent		[NASA-CASE-XLA-04980-2]	c14 N72-28438
[NASA-CASE-XLA-08916]	c15 N71-29018	Screened circuit capacitors	
Maksutov spectrograph Patent		[NASA-CASE-LAR-10294-1]	c26 N72-28762
[NASA-CASE-XLA-10402]	c14 N71-29041	Deposition apparatus	
Two component bearing Patent		[NASA-CASE-LAR-10541-1]	c15 N72-32487
[NASA-CASE-XLA-00013]	c15 N71-29136	Lift balancing device	
Digital pulse width selection circuit Patent		[NASA-CASE-LAR-10348-1]	c11 N73-12264
[NASA-CASE-XLA-07788]	c09 N71-29139	Air removal device	
Magnetically controlled plasma accelerator Patent		[NASA-CASE-XLA-8914]	c15 N73-12492
[NASA-CASE-XLA-00327]	c25 N71-29184	Nondestructive spot test method for titanium and	
Boring bar drive mechanism Patent		titanium alloys	
[NASA-CASE-XLA-03661]	c15 N71-33518	[NASA-CASE-LAR-10539-1]	c17 N73-12547
Wind tunnel model damper Patent		Logical function generator	
[NASA-CASE-XLA-09480]	c11 N71-33612	[NASA-CASE-XLA-05099]	c09 N73-13209
Variable geometry rotor system		Ferry system	
[NASA-CASE-LAR-10557]	c02 N72-11018	[NASA-CASE-LAR-10574-1]	c11 N73-13257
Flared tube strainer		Flow velocity and directional instrument	
[NASA-CASE-XLA-05056]	c15 N72-11389	[NASA-CASE-LAR-10855-1]	c14 N73-13415
Impact measuring technique		Vortex breech high pressure gas generator	
[NASA-CASE-LAR-10913]	c14 N72-16282	[NASA-CASE-LAR-10549-1]	c31 N73-13898
Technique of duplicating fragile core		Butt welder for fine gauge tungsten/rhenium	
[NASA-CASE-XLA-07829]	c15 N72-16329	thermocouple wire	
Tube fabricating process		[NASA-CASE-LAR-10103-1]	c15 N73-14468
[NASA-CASE-LAR-10203-1]	c15 N72-16330	Method of detecting oxygen in a gas	
Air bearing		[NASA-CASE-LAR-10668-1]	c06 N73-16106
[NASA-CASE-WLP-10002]	c15 N72-17451	Combustion detector	
Extensometer frame		[NASA-CASE-LAR-10739-1]	c14 N73-16484
[NASA-CASE-XLA-10322]	c15 N72-17452	Laser communication system for controlling	
Split range transducer		several functions at a location remote to the	
[NASA-CASE-XLA-11189]	c10 N72-20222	laser	
Stereo photomicrography system		[NASA-CASE-LAR-10311-1]	c16 N73-16536
[NASA-CASE-LAR-10176-1]	c14 N72-20380	Apparatus for photographing meteors	
Radar calibration sphere		[NASA-CASE-LAR-10226-1]	c14 N73-19419
[NASA-CASE-XLA-11154]	c07 N72-21117	Zero gravity liquid mixer	
Recorder using selective noise filter		[NASA-CASE-LAR-10195-1]	c15 N73-19458
[NASA-CASE-ERC-10112]	c07 N72-21119	Rate data encoder	
Stacked array of omnidirectional antennas		[NASA-CASE-LAR-10128-1]	c08 N73-20217
[NASA-CASE-LAR-10545-1]	c09 N72-21244		

Function generator for synthesizing complex vibration mode patterns  
[NASA-CASE-LAR-10310-1] c10 N73-20253

Infrared horizon locator  
[NASA-CASE-LAR-10726-1] c14 N73-20475

Light intensity strain analysis  
[NASA-CASE-LAR-10765-1] c32 N73-20740

Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10578-1] c12 N73-25262

Cable restraint  
[NASA-CASE-LAR-10129-1] c15 N73-25512

Electronic strain-level counter  
[NASA-CASE-LAR-10756-1] c32 N73-26910

Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c17 N73-27446

Ablation article and method  
[NASA-CASE-LAR-10439-1] c33 N73-27796

Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c12 N73-28144

Pressurized panel  
[NASA-CASE-XLA-08916-2] c14 N73-28487

Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c21 N73-30641

Exposure interlock for oscilloscope cameras  
[NASA-CASE-LAR-10319-1] c14 N73-32322

Meteoroid detector  
[NASA-CASE-LAR-10483-1] c14 N73-32327

Lightweight, variable solidity knitted parachute fabric  
[NASA-CASE-LAR-10776-1] c02 N74-10034

Technique for extending the frequency range of digital dividers  
[NASA-CASE-LAR-10730-1] c33 N74-10223

Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c33 N74-11050

Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c37 N74-11301

System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c35 N74-13132

Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c31 N74-13177

Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c37 N74-13178

Transmitting and reflecting diffuser  
[NASA-CASE-LAR-10385-2] c70 N74-13436

Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c31 N74-14133

Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c54 N74-14845

Attitude sensor  
[NASA-CASE-LAR-10586-1] c19 N74-15089

Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c35 N74-15091

In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c35 N74-15092

Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c34 N74-15652

Ejectable underwater sound source recovery assembly  
[NASA-CASE-LAR-10595-1] c35 N74-16135

Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c09 N74-17955

High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c35 N74-18088

Method of fabricating an article with cavities  
[NASA-CASE-LAR-10318-1] c31 N74-18089

Apparatus for remote handling of materials  
[NASA-CASE-LAR-10634-1] c37 N74-18123

Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c31 N74-18124

Method for determining thermo-physical properties of specimens  
[NASA-CASE-LAR-11053-1] c25 N74-18551

Anti-buckling fatigue test assembly  
[NASA-CASE-LAR-10426-1] c09 N74-19528

Reefing system  
[NASA-CASE-LAR-10129-2] c37 N74-20063

A synchronous binary array divider  
[NASA-CASE-ERC-10180-1] c60 N74-20836

Orbital and entry tracking accessory for globes  
[NASA-CASE-LAR-10626-1] c19 N74-21015

Digital controller for a Baum folding machine  
[NASA-CASE-LAR-10688-1] c37 N74-21056

Totally confined explosive welding  
[NASA-CASE-LAR-10941-1] c37 N74-21057

Method of fabricating an object with a thin wall having a precisely shaped slit  
[NASA-CASE-LAR-10409-1] c31 N74-21059

Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c35 N74-21062

Means for accommodating large overstrain in lead wires  
[NASA-CASE-LAR-10168-1] c33 N74-22865

Bonded joint and method  
[NASA-CASE-LAR-10900-1] c37 N74-23064

Light shield and cooling apparatus  
[NASA-CASE-LAR-10089-1] c34 N74-23066

Method of laminating structural members  
[NASA-CASE-XLA-11028-1] c24 N74-27035

Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c15 N74-27360

Apparatus for inserting and removing specimens from high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c31 N74-27900

Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c37 N74-27905

Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c24 N74-30001

Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c08 N74-30421

Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c09 N74-30597

Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c34 N74-30608

Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c07 N74-31270

Noise suppressor  
[NASA-CASE-LAR-11141-1] c07 N74-32418

Measuring probe position recorder  
[NASA-CASE-LAR-10806-1] c35 N74-32877

Stagnation pressure probe  
[NASA-CASE-LAR-11139-1] c35 N74-32878

Molding apparatus  
[NASA-CASE-LAR-10489-2] c31 N74-32920

Remote fire stack igniter  
[NASA-CASE-MPS-21675-1] c25 N74-33378

Open tube guideway for high speed air cushioned vehicles  
[NASA-CASE-LAR-10256-1] c85 N74-34672

Fast scan control for deflection type mass spectrometers  
[NASA-CASE-LAR-11428-1] c35 N74-34857

Apparatus for microbiological sampling  
[NASA-CASE-LAR-11069-1] c35 N75-12272

Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c37 N75-12326

Determining particle density using known material Hugoniot curves  
[NASA-CASE-LAR-11059-1] c76 N75-12810

Method for making conductors for ferrite memory arrays  
[NASA-CASE-LAR-10994-1] c24 N75-13032

Evacuated, displacement compression mold  
[NASA-CASE-LAR-10782-2] c31 N75-13111

Automatic inoculating apparatus  
[NASA-CASE-LAR-11074-1] c51 N75-13502

Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014

Kinesthetic control simulator  
[NASA-CASE-LAR-10276-1] c09 N75-15662

Electrostatic measurement system  
[NASA-CASE-MPS-22129-1] c33 N75-18477

Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c35 N75-19611

Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c35 N75-19612

Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c35 N75-19613

Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c35 N75-19614

Laser head for simultaneous optical pumping of several dye lasers	[NASA-CASE-LAR-11341-1]	c36 N75-19655	Casting propellant in rocket engine	[NASA-CASE-LAR-11995-1]	c28 N77-10213
High lift aircraft	[NASA-CASE-LAR-11252-1]	c05 N75-25914	Anti-multipath digital signal detector	[NASA-CASE-LAR-11827-1]	c32 N77-10392
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements	[NASA-CASE-LAR-11144-1]	c25 N75-26043	Weld-bonded titanium structures	[NASA-CASE-LAR-11549-1]	c37 N77-11397
Resonant waveguide stark cell	[NASA-CASE-LAR-11352-1]	c33 N75-26245	Phase modulating with odd and even finite power series of a modulating signal	[NASA-CASE-LAR-11607-1]	c32 N77-14292
Fluid control apparatus and method	[NASA-CASE-LAR-11110-1]	c34 N75-26282	Miniature biaxial strain transducer	[NASA-CASE-LAR-11648-1]	c35 N77-14407
Electrolytic cell structure	[NASA-CASE-LAR-11042-1]	c33 N75-27252	Precision alignment apparatus for cutting a workpiece	[NASA-CASE-LAR-11658-1]	c37 N77-14478
Automatic microbial transfer device	[NASA-CASE-LAR-11354-1]	c35 N75-27330	Solid propellant rocket motor and method of making same	[NASA-CASE-LAR-1349]	c20 N77-17143
Polyimide adhesives	[NASA-CASE-LAR-11397-1]	c27 N75-29263	Particulate and solar radiation stable coating for spacecraft	[NASA-CASE-LAR-10805-2]	c34 N77-18382
Bonding method in the manufacture of continuous regression rate sensor devices	[NASA-CASE-LAR-10337-1]	c24 N75-30260	Magnetic heading reference	[NASA-CASE-LAR-11387-2]	c04 N77-19056
Meteoroid impact position locator aid for manned space station	[NASA-CASE-LAR-10629-1]	c35 N75-33367	Binocular device for displaying numerical information in field of view	[NASA-CASE-LAR-11782-1]	c74 N77-20882
Measurement of gas production of microorganisms	[NASA-CASE-LAR-11326-1]	c35 N75-33368	Method of locating persons in distress	[NASA-CASE-LAR-11390-1]	c32 N77-21267
Self-supporting strain transducer	[NASA-CASE-LAR-11263-1]	c35 N75-33369	Amplifying ribbon extensometer	[NASA-CASE-LAR-11825-1]	c35 N77-22449
Annular momentum control device used for stabilization of space vehicles and the like	[NASA-CASE-LAR-11051-1]	c15 N76-14158	Method of forming shrink-fit compression seal	[NASA-CASE-LAR-11563-1]	c37 N77-23482
Multichannel logarithmic RF level detector	[NASA-CASE-LAR-11021-1]	c32 N76-14321	Vortex generator for controlling the dispersion of effluents in a flowing liquid	[NASA-CASE-LAR-12045-1]	c34 N77-24423
Turnstile and flared cone UHF antenna	[NASA-CASE-LAR-10970-1]	c33 N76-14372	Process for control of cell division	[NASA-CASE-LAR-10773-3]	c51 N77-25769
Static pressure probe	[NASA-CASE-LAR-11552-1]	c35 N76-14429	Electro-mechanical sine/cosine generator	[NASA-CASE-LAR-11389-1]	c33 N77-26387
Horn antenna having V-shaped corrugated slots	[NASA-CASE-LAR-11112-1]	c32 N76-15330	Apparatus for determining thermophysical properties of test specimens	[NASA-CASE-LAR-11883-1]	c09 N77-27131
Ultrasonic calibration device	[NASA-CASE-LAR-11435-1]	c35 N76-15432	Automated single-slide staining device	[NASA-CASE-LAR-11649-1]	c51 N77-27677
Deploy/release system	[NASA-CASE-LAR-11575-1]	c02 N76-16014	Dual cycle aircraft turbine engine	[NASA-CASE-LAR-11310-1]	c07 N77-28118
Clock setter	[NASA-CASE-LAR-11458-1]	c35 N76-16392	Composite sandwich lattice structure	[NASA-CASE-LAR-11898-1]	c24 N78-10214
Heat exchanger system and method	[NASA-CASE-LAR-11079-2]	c34 N76-17317	Differential sound level meter	[NASA-CASE-LAR-12106-1]	c71 N78-14867
Stack plume visualization system	[NASA-CASE-LAR-11675-1]	c45 N76-17656	Thermoluminescent aerosol analysis	[NASA-CASE-LAR-12046-1]	c25 N78-15210
Cascade plug nozzle	[NASA-CASE-LAR-11674-1]	c07 N76-18117	CW ultrasonic bolt tensioning monitor	[NASA-CASE-LAR-12016-1]	c39 N78-15512
Exhaust flow deflector	[NASA-CASE-LAR-11570-1]	c34 N76-18364	Solar heating system	[NASA-CASE-LAR-12009-1]	c44 N78-15560
Method and apparatus for tensile testing of metal foil	[NASA-CASE-LAR-10208-1]	c35 N76-18400	Transmitting and reflecting diffuser	[NASA-CASE-LAR-10385-3]	c74 N78-15879
Method and apparatus for fluffing, separating, and cleaning fibers	[NASA-CASE-LAR-11224-1]	c37 N76-18456	TV fatigue crack monitoring system	[NASA-CASE-LAR-11490-1]	c39 N78-16387
Therapeutic hand exerciser	[NASA-CASE-LAR-11667-1]	c52 N76-19785	Method of making a composite sandwich lattice structure	[NASA-CASE-LAR-11898-2]	c24 N78-17149
Magnetic heading reference	[NASA-CASE-LAR-11387-1]	c04 N76-20114	Composite lamination method	[NASA-CASE-LAR-12019-1]	c24 N78-17150
Apparatus for positioning modular components on a vertical or overhead surface	[NASA-CASE-LAR-11465-1]	c37 N76-21554	Polyimide adhesives	[NASA-CASE-LAR-12181-1]	c27 N78-17205
Airfoil shape for flight at subsonic speeds	[NASA-CASE-LAR-10585-1]	c02 N76-22154	Thermal shock and erosion resistant tantalum carbide ceramic material	[NASA-CASE-LAR-11902-1]	c27 N78-17206
Particulate and aerosol detector	[NASA-CASE-LAR-11434-1]	c35 N76-22509	Optical scanner	[NASA-CASE-LAR-11711-1]	c74 N78-17866
High temperature strain gage calibration fixture	[NASA-CASE-LAR-11500-1]	c35 N76-24523	Fuselage structure using advanced technology metal matrix fiber reinforced composites	[NASA-CASE-LAR-11688-1]	c05 N78-18045
Vacuum pressure molding technique	[NASA-CASE-LAR-10073-1]	c37 N76-24575	Molded composite pyrogen igniter for rocket motors	[NASA-CASE-LAR-12018-1]	c20 N78-24275
Instrumentation for measuring aircraft noise and sonic boom	[NASA-CASE-LAR-11476-1]	c07 N76-27232	Non-destructive method for applying and removing instrumentation on helicopter rotor blades	[NASA-CASE-LAR-11201-1]	c35 N78-24515
Connector	[NASA-CASE-LAR-11709-1]	c37 N76-27567	Two dimensional wedge/translating shroud nozzle	[NASA-CASE-LAR-11919-1]	c07 N78-27121
Capillary flow weld-bonding	[NASA-CASE-LAR-11726-1]	c37 N76-27568	Remote water monitoring system	[NASA-CASE-LAR-11973-1]	c35 N78-27384
Detector absorptivity measuring method and apparatus	[NASA-CASE-LAR-10907-1]	c35 N76-29551	Magnetic suspension and pointing system	[NASA-CASE-LAR-11889-2]	c37 N78-27424
Method for detecting pollutants	[NASA-CASE-LAR-11405-1]	c45 N76-31714	Device for measuring the contour of a surface	[NASA-CASE-LAR-11869-1]	c74 N78-27904
Wingtip vortex dissipator for aircraft	[NASA-CASE-LAR-11645-1]	c02 N77-10001	Supersonic transport	[NASA-CASE-LAR-11932-1]	c05 N78-32086

Hypersonic airbreathing missile		
[NASA-CASE-LAR-12264-1]	c15	N78-32168
Process for preparing thermoplastic aromatic polyimides		
[NASA-CASE-LAR-11828-1]	c27	N78-32261
Magnetometer with a miniature transducer and automatic scanning		
[NASA-CASE-LAR-11617-2]	c35	N78-32397
Independent power generator		
[NASA-CASE-LAR-11208-1]	c44	N78-32539
Pseudo continuous wave instrument		
[NASA-CASE-LAR-12260-1]	c35	N79-10390
Nozzle extraction process and handlemeter for measuring handle		
[NASA-CASE-LAR-12147-1]	c31	N79-11246
Fluid velocity measuring device		
[NASA-CASE-LAR-11729-1]	c34	N79-12359
Totally confined explosive welding		
[NASA-CASE-LAR-10941-2]	c37	N79-13364
Vortex-lift roll-control device		
[NASA-CASE-LAR-11868-2]	c08	N79-14108
Electronically scanned pressure sensor module with in SITU calibration capability		
[NASA-CASE-LAR-12230-1]	c35	N79-14347
Versatile LDV burst simulator		
[NASA-CASE-LAR-11859-1]	c35	N79-14349
Locking redundant link		
[NASA-CASE-LAR-11900-1]	c37	N79-14382
Chromatically corrected virtual image display		
[NASA-CASE-LAR-12251-1]	c74	N79-14892
Apparatus for measuring an aircraft's speed and height		
[NASA-CASE-LAR-12275-1]	c35	N79-18296
Volumetric direct nuclear pumped laser		
[NASA-CASE-LAR-12183-1]	c36	N79-18307
Wind tunnel		
[NASA-CASE-LAR-10135-1]	c09	N79-21083
Fatigue failure load indicator		
[NASA-CASE-LAR-12027-1]	c39	N79-22537
Filtering technique based on high-frequency plant modeling for high-gain control		
[NASA-CASE-LAR-12215-1]	c08	N79-23097
Electrochemical detection device		
[NASA-CASE-LAR-11922-1]	c25	N79-24073
High-temperature microphone system		
[NASA-CASE-LAR-12375-1]	c32	N79-24203
Helicopter rotor airfoil		
[NASA-CASE-LAR-12396-1]	c02	N79-24958
Rotary target V-block		
[NASA-CASE-LAR-12007-2]	c74	N79-25876
Magnetic suspension and pointing system		
[NASA-CASE-LAR-11889-1]	c35	N79-26372
Seat cushion to provide realistic acceleration cues to aircraft simulator pilot		
[NASA-CASE-LAR-12149-2]	c09	N79-31228
Mixed diamines for lower melting addition polyimide preparation and utilization		
[NASA-CASE-LAR-12054-1]	c27	N79-33316
One step dual purpose joining technique		
[NASA-CASE-LAR-12595-1]	c37	N80-11469
Multiwall thermal protection system		
[NASA-CASE-LAR-12620-1]	c24	N80-12117
Scanning afocal laser velocimeter projection lens system		
[NASA-CASE-LAR-12328-1]	c74	N80-12866
Displacement probes with self-contained exciting medium		
[NASA-CASE-LAR-11690-1]	c35	N80-14371
Means for controlling aerodynamically induced twist		
[NASA-CASE-LAR-12175-1]	c05	N80-16055
Crystalline polyimides		
[NASA-CASE-LAR-12099-1]	c27	N80-16158
Laser Doppler velocity simulator		
[NASA-CASE-LAR-12176-1]	c36	N80-16321
Static pressure orifice system testing method and apparatus		
[NASA-CASE-LAR-12269-1]	c35	N80-18358
Liquid-immersible electrostatic ultrasonic transducer		
[NASA-CASE-LAR-12465-1]	c35	N80-18363
Improved tire/wheel concept		
[NASA-CASE-LAR-11695-2]	c37	N80-18402
Radar target for remotely sensing hydrological phenomena		
[NASA-CASE-LAR-12344-1]	c43	N80-18498
Solar cell angular position transducer		
[NASA-CASE-LAR-11999-1]	c44	N80-18552
Detection of the transitional layer between laminar and turbulent flow areas on a wing surface		
[NASA-CASE-LAR-12261-1]	c02	N80-20224
CDS solid state phase insensitive ultrasonic transducer		
[NASA-CASE-LAR-12304-1]	c35	N80-20559
Combined solar collector and energy storage system		
[NASA-CASE-LAR-12205-1]	c44	N80-20810
Noncontacting method for measuring angular deflection		
[NASA-CASE-LAR-12178-1]	c74	N80-21138
Decoupler pylon: Wing/store flutter suppressor		
[NASA-CASE-LAR-12468-1]	c08	N80-22359
Mechanical end joint system for structural column elements		
[NASA-CASE-LAR-12482-1]	c37	N80-22704
Electrically conductive palladium containing polyimide films		
[NASA-CASE-LAR-12705-1]	c33	N80-24549
Heating and cooling system		
[NASA-CASE-LAR-12393-1]	c39	N80-25693
Frequency tracked pulse technique for ultrasonic analysis		
[NASA-CASE-LAR-12697-1]	c32	N80-26571
Chromatically corrected virtual image visual display		
[NASA-CASE-LAR-12251-1]	c74	N80-27185
Heat treat fixture and method of heat treating		
[NASA-CASE-LAR-11821-1]	c26	N80-28492
Photocapacitive image converter		
[NASA-CASE-LAR-12513-1]	c33	N80-28635
Dual acting slit control mechanism		
[NASA-CASE-LAR-11370-1]	c35	N80-28686
Visible and infrared polarization ratio spectrophotometer		
[NASA-CASE-LAR-12285-1]	c35	N80-28687
Collapsible corrugated horn antenna		
[NASA-CASE-LAR-11745-1]	c32	N80-29539
Natural turbulence electrical power generator		
[NASA-CASE-LAR-11551-1]	c44	N80-29834
Digital demodulator		
[NASA-CASE-LAR-12659-1]	c33	N80-31731
Film advance indicator		
[NASA-CASE-LAR-12474-1]	c35	N80-31774
Process for preparing high temperature polyimide film laminates		
[NASA-CASE-LAR-12742-1]	c24	N81-12174
Miniature spectrally selective dosimeter		
[NASA-CASE-LAR-12469-1]	c35	N81-12388
Pyroelectric detector arrays		
[NASA-CASE-LAR-12363-1]	c35	N81-12389
Modified spiral wound retaining ring		
[NASA-CASE-LAR-12361-1]	c37	N81-12422
Acoustic tooth cleaner		
[NASA-CASE-LAR-12471-1]	c52	N81-12724
Partial interlaminar separation system for composites		
[NASA-CASE-LAR-12065-1]	c24	N81-14000
Method for preparing addition type polyimide prepreps		
[NASA-CASE-LAR-12054-2]	c27	N81-14078
Method and tool for machining a transverse slot about a bore		
[NASA-CASE-LAR-11855-1]	c37	N81-14319
Aerodynamic side-force alleviator means		
[NASA-CASE-LAR-12326-1]	c02	N81-14968
Thermoset-thermoplastic aromatic polyamides		
[NASA-CASE-LAR-12723-1]	c27	N81-15107
Pulsed phase locked loop strain monitor		
[NASA-CASE-LAR-12772-1]	c33	N81-15195
Leading edge vortex flaps for drag reduction		
[NASA-CASE-LAR-12750-1]	c02	N81-19016
Compensating linkage for main rotor control		
[NASA-CASE-LAR-11797-1]	c05	N81-19087
Thrust augmented spin recovery device		
[NASA-CASE-LAR-11970-2]	c08	N81-19130
A low energy electron magnetometer		
[NASA-CASE-LAR-12706-1]	c35	N81-19428
Fixture for environmental exposure of structural materials under compression		
[NASA-CASE-LAR-12602-1]	c35	N81-19429
Velocity vector control system augmented with direct lift control		
[NASA-CASE-LAR-12268-1]	c08	N81-24106
Direction sensitive laser velocimeter		
[NASA-CASE-LAR-12177-1]	c36	N81-24422
Tire/wheel concept		
[NASA-CASE-LAR-11695-2]	c37	N81-24443



Heat pipe cooled probe				Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases	
[NASA-CASE-LAR-12588-1]	c44	N81-24525		[NASA-CASE-XLE-00690]	c25 N69-39884
Lightweight structural columns				Ion thruster cathode	
[NASA-CASE-LAR-12095-1]	c31	N81-25258		[NASA-CASE-XLE-07087]	c06 N69-39889
Foldable beam				Superconducting alternator	
[NASA-CASE-LAR-12077-1]	c31	N81-25259		[NASA-CASE-XLE-02824]	c03 N69-39890
Cooling system for high speed aircraft				Triode thermionic energy converter	
[NASA-CASE-LAR-12406-1]	c05	N81-26114		[NASA-CASE-XLE-01015]	c03 N69-39898
Pitch attitude stabilization system utilizing engine pressure ratio feedback signals				Slug flow magnetohydrodynamic generator	
[NASA-CASE-LAR-12562-1]	c08	N81-26152		[NASA-CASE-XLE-02083]	c03 N69-39983
Oribiter/launch system				Reduced gravity liquid configuration simulator	
[NASA-CASE-LAR-12250-1]	c14	N81-26161		[NASA-CASE-XLE-02624]	c12 N69-39988
Adaptive polarization separation				Transpiration cooled turbine blade manufactured from wires Patent	
[NASA-CASE-LAR-12196-1]	c33	N81-26358		[NASA-CASE-XLE-00020]	c15 N70-33226
Wingtip vortex turbine				Rocket propellant injector Patent	
[NASA-CASE-LAR-12544-1]	c07	N81-27096		[NASA-CASE-XLE-00103]	c28 N70-33241
A self-correcting electronically scanned pressure sensor				Modification and improvements to cooled blades Patent	
[NASA-CASE-LAR-12686-1]	c09	N81-27121		[NASA-CASE-XLE-00092]	c15 N70-33264
Telescoping columns				Colloid propulsion method and apparatus Patent	
[NASA-CASE-LAR-12195-1]	c31	N81-27324		[NASA-CASE-XLE-00817]	c28 N70-33265
Helmet weight simulator				High-vacuum condenser tank for ion rocket tests Patent	
[NASA-CASE-LAR-12320-1]	c54	N81-27806		[NASA-CASE-XLE-00168]	c11 N70-33278
Indirect microbial detection				High temperature nickel-base alloy Patent	
[NASA-CASE-LAR-12520-1]	c51	N81-28698		[NASA-CASE-XLE-00151]	c17 N70-33283
Explosively activated egress area				Annular rocket motor and nozzle configuration Patent	
[NASA-CASE-LAR-12624-1]	c03	N81-29107		[NASA-CASE-XLE-00078]	c28 N70-33284
A rectangular rod-wall sound shield				Reinforced metallic composites Patent	
[NASA-CASE-LAR-12883-1]	c09	N81-29138		[NASA-CASE-XLE-02428]	c17 N70-33288
Rim inertial measuring system				Process for applying a protective coating for salt bath brazing Patent	
[NASA-CASE-LAR-12052-1]	c18	N81-29152		[NASA-CASE-XLE-00046]	c15 N70-33311
Tackifier for addition polyimides containing monoethylphthalate				Wire grid forming apparatus Patent	
[NASA-CASE-LAR-12642-1]	c27	N81-29229		[NASA-CASE-XLE-00023]	c15 N70-33330
Automated syringe sampler				Electro-thermal rocket Patent	
[NASA-CASE-LAR-12308-1]	c35	N81-29407		[NASA-CASE-XLE-00267]	c28 N70-33356
Apparatus and process for microbial detection and enumeration				External liquid-spray cooling of turbine blades Patent	
[NASA-CASE-LAR-12709-1]	c51	N81-29727		[NASA-CASE-XLE-00037]	c28 N70-33372
Low X-ray absorption aneurism clips				Apparatus for igniting solid propellants Patent	
[NASA-CASE-LAR-12650-1]	c52	N81-29768		[NASA-CASE-XLE-00207]	c28 N70-33375
Aeroelastic instability stoppers for wind-tunnel models				Flexible seal for valves Patent	
[NASA-CASE-LAR-12720-1]	c09	N81-31229		[NASA-CASE-XLE-00101]	c15 N70-33376
Aeroelastic instability stoppers for wind-tunnel models				Apparatus for making a metal slurry product Patent	
[NASA-CASE-LAR-12458-1]	c09	N81-31230		[NASA-CASE-XLE-00010]	c15 N70-33382
Unequal split microwave power divider				Energy conversion apparatus Patent	
[NASA-CASE-LAR-12889-1]	c33	N81-31483		[NASA-CASE-XLE-00212]	c03 N70-34134
An instrument for determining coincidence and elapse time between independent sources of random sequential events				Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent	
[NASA-CASE-LAR-12531-1]	c35	N81-31529		[NASA-CASE-XLE-00266]	c14 N70-34156
Universal connectors for joining stringers				Electrothermal rockets having improved heat exchangers Patent	
[NASA-CASE-LAR-12744-1]	c37	N81-31551		[NASA-CASE-XLE-01783]	c28 N70-34175
Ride quality meter				Venting vapor apparatus Patent	
[NASA-CASE-LAR-12882-1]	c54	N81-31848		[NASA-CASE-XLE-00288]	c15 N70-34247
Solar powered aircraft				Thrust vector control apparatus Patent	
[NASA-CASE-LAR-12615-1]	c05	N81-32138		[NASA-CASE-XLE-00208]	c28 N70-34294
Solar driven liquid metal MHD power generator				High temperature heat source Patent	
[NASA-CASE-LAR-12495-1]	c44	N81-32609		[NASA-CASE-XLE-00490]	c33 N70-34545
Propulsive lateral control nozzle				Inlet deflector for jet engines Patent	
[NASA-CASE-LAR-12136-1]	c08	N81-33210		[NASA-CASE-XLE-00388]	c28 N70-34788
Method of making a partial interlaminar separation composite system				Radiant heater having formed filaments Patent	
[NASA-CASE-LAR-12065-2]	c24	N81-33235		[NASA-CASE-XLE-00387]	c33 N70-34812
Wind tunnel supplementary Mach number minimum section insert				Optical torque meter Patent	
[NASA-CASE-LAR-12532-1]	c09	N82-11088		[NASA-CASE-XLE-00503]	c14 N70-34818
Aluminum ion-containing polyimide adhesives				Electric propulsion engine test chamber Patent	
[NASA-CASE-LAR-12640-1]	c27	N82-11206		[NASA-CASE-XLE-00252]	c11 N70-34844
Small conductive particle sensor				Conical valve plug Patent	
[NASA-CASE-LAR-12552-1]	c35	N82-11431		[NASA-CASE-XLE-00715]	c15 N70-34859
Large volume multiple-path nuclear pumped laser				Channel-type shell construction for rocket engines and the like Patent	
[NASA-CASE-LAR-12592-1]	c36	N82-13415		[NASA-CASE-XLE-00144]	c28 N70-34860
<b>NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.</b>				Non-reusable kinetic energy absorber Patent	
<b>LEWIS RESEARCH CENTER, CLEVELAND, OHIO.</b>				[NASA-CASE-XLE-00810]	c15 N70-34861
Foil seal				High temperature testing apparatus Patent	
[NASA-CASE-XLE-05130]	c15	N69-21362		[NASA-CASE-XLE-00335]	c14 N70-35368
Fluid jet amplifier				Ion thruster cathode Patent Application	
[NASA-CASE-XLE-03512]	c12	N69-21466		[NASA-CASE-XLE-10814-1]	c28 N70-35422
Electrode and insulator with shielded dielectric junction				Formed metal ribbon wrap Patent	
[NASA-CASE-XLE-03778]	c09	N69-21542		[NASA-CASE-XLE-00164]	c15 N70-36411
Thin window, drifted silicon, charged particle detector				Multistage multiple-reentry turbine Patent	
[NASA-CASE-XLE-10529]	c14	N69-23191		[NASA-CASE-XLE-00170]	c15 N70-36412



Fluid coupling Patent		
[NASA-CASE-XLE-00397]	c15	N70-36492
Injector-valve device Patent		
[NASA-CASE-XLE-00303]	c15	N70-36535
Nickel-base alloy Patent		
[NASA-CASE-XLE-00283]	c17	N70-36616
Apparatus having coaxial capacitor structure for measuring fluid density Patent		
[NASA-CASE-XLE-00143]	c14	N70-36618
Rocket thrust chamber Patent		
[NASA-CASE-XLE-00145]	c28	N70-36806
Ion rocket Patent		
[NASA-CASE-XLE-00376]	c28	N70-37245
Annular supersonic decelerator or drogue Patent		
[NASA-CASE-XLE-00222]	c02	N70-37939
Rocket engine Patent		
[NASA-CASE-XLE-00342]	c28	N70-37980
Variable sweep aircraft wing Patent		
[NASA-CASE-XLE-00350]	c02	N70-38011
Apparatus for transferring cryogenic liquids Patent		
[NASA-CASE-XLE-00345]	c15	N70-38020
Method of producing porous tungsten ionizers for ion rocket engines Patent		
[NASA-CASE-XLE-00455]	c28	N70-38197
Method of making fiber reinforced metallic composites Patent		
[NASA-CASE-XLE-00231]	c17	N70-38198
Rocket engine injector Patent		
[NASA-CASE-XLE-00111]	c28	N70-38199
Reinforced metallic composites Patent		
[NASA-CASE-XLE-00228]	c17	N70-38490
Rocket motor system Patent		
[NASA-CASE-XLE-00323]	c28	N70-38505
Particle beam measurement apparatus using beam kinetic energy to change the heat sensitive resistance of the detection probe Patent		
[NASA-CASE-XLE-00243]	c14	N70-38602
Penshape exhaust nozzle for supersonic engine Patent		
[NASA-CASE-XLE-00057]	c28	N70-38711
Multi-stage multiple-reentry turbine Patent		
[NASA-CASE-XLE-00085]	c28	N70-39895
Gas lubricant compositions Patent		
[NASA-CASE-XLE-00353]	c18	N70-39897
Telescoping-spike supersonic inlet for aircraft engines Patent		
[NASA-CASE-XLE-00005]	c28	N70-39899
High temperature spark plug Patent		
[NASA-CASE-XLE-00660]	c28	N70-39925
Low viscosity magnetic fluid obtained by the colloidal suspension of magnetic particles Patent		
[NASA-CASE-XLE-01512]	c12	N70-40124
Apparatus for absorbing and measuring power Patent		
[NASA-CASE-XLE-00720]	c14	N70-40201
Device for directionally controlling electromagnetic radiation Patent		
[NASA-CASE-XLE-01716]	c09	N70-40234
Method for continuous variation of propellant flow and thrust in propulsive devices Patent		
[NASA-CASE-XLE-00177]	c28	N70-40367
Apparatus for increasing ion engine beam density Patent		
[NASA-CASE-XLE-00519]	c28	N70-41576
Foldable conduit Patent		
[NASA-CASE-XLE-00620]	c32	N70-41579
Liquid storage tank venting device for zero gravity environment Patent		
[NASA-CASE-XLE-01449]	c15	N70-41646
Method of making a regeneratively cooled combustion chamber Patent		
[NASA-CASE-XLE-00150]	c28	N70-41818
Instrument for the quantitative measurement of radiation at multiple wave lengths Patent		
[NASA-CASE-XLE-00011]	c14	N70-41946
Small rocket engine Patent		
[NASA-CASE-XLE-00685]	c28	N70-41992
Apparatus for positioning and loading a test specimen Patent		
[NASA-CASE-XLE-01300]	c15	N70-41993
Liquid flow sight assembly Patent		
[NASA-CASE-XLE-02998]	c14	N70-42074
Inductive liquid level detection system Patent		
[NASA-CASE-XLE-01609]	c14	N71-10500
Method of forming thin window drifted silicon charged particle detector Patent		
[NASA-CASE-XLE-00808]	c24	N71-10560
Electrostatic thruster with improved insulators Patent		
[NASA-CASE-XLE-01902]	c28	N71-10574
Thin-walled pressure vessel Patent		
[NASA-CASE-XLE-04677]	c15	N71-10577
Method of making a silicon semiconductor device Patent		
[NASA-CASE-XLE-02792]	c26	N71-10607
Metallic film diffusion for boundary lubrication Patent		
[NASA-CASE-XLE-01765]	c18	N71-10772
Molecular beam velocity selector Patent		
[NASA-CASE-XLE-01533]	c11	N71-10777
Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent		
[NASA-CASE-XLE-01246]	c14	N71-10797
Capacitor and method of making same Patent		
[NASA-CASE-XLE-10364-1]	c09	N71-13522
Capillary radiator Patent		
[NASA-CASE-XLE-03307]	c33	N71-14035
Electrostatic ion engine having a permanent magnetic circuit Patent		
[NASA-CASE-XLE-01124]	c28	N71-14043
Split welding chamber Patent		
[NASA-CASE-XLE-11531]	c15	N71-14932
Method and apparatus for making curved reflectors Patent		
[NASA-CASE-XLE-08917]	c15	N71-15597
Method of making a diffusion bonded refractory coating Patent		
[NASA-CASE-XLE-01604-2]	c15	N71-15610
Black-body furnace Patent		
[NASA-CASE-XLE-01399]	c33	N71-15625
Method of igniting solid propellants Patent		
[NASA-CASE-XLE-01988]	c27	N71-15634
Fluid dispensing apparatus and method Patent		
[NASA-CASE-XLE-01182]	c27	N71-15635
Automatically deploying nozzle exit cone extension Patent		
[NASA-CASE-XLE-01640]	c31	N71-15637
High temperature cobalt-base alloy Patent		
[NASA-CASE-XLE-00726]	c17	N71-15644
Method of making a rocket motor casing Patent		
[NASA-CASE-XLE-00409]	c28	N71-15658
Rocket motor casing Patent		
[NASA-CASE-XLE-05689]	c28	N71-15659
Electrostatic ion rocket engine Patent		
[NASA-CASE-XLE-02066]	c28	N71-15661
High temperature cobalt-base alloy Patent		
[NASA-CASE-XLE-02991]	c17	N71-16025
Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B Patent		
[NASA-CASE-XLE-02082]	c17	N71-16026
Method of improving the reliability of a rolling element system Patent		
[NASA-CASE-XLE-02999]	c15	N71-16052
Process of casting heavy slips Patent		
[NASA-CASE-XLE-00106]	c15	N71-16076
Boiler for generating high quality vapor Patent		
[NASA-CASE-XLE-00785]	c33	N71-16104
Method of making self lubricating fluoride-metal composite materials Patent		
[NASA-CASE-XLE-08511-2]	c18	N71-16105
Thrust and direction control apparatus Patent		
[NASA-CASE-XLE-03583]	c31	N71-17629
Linear magnetic brake with two windings Patent		
[NASA-CASE-XLE-05079]	c15	N71-17652
Method of lubricating rolling element bearings Patent		
[NASA-CASE-XLE-09527]	c15	N71-17688
Hot wire liquid level detector for cryogenic fluids Patent		
[NASA-CASE-XLE-00454]	c23	N71-17802
Pulsed differential comparator circuit Patent		
[NASA-CASE-XLE-03804]	c10	N71-19471
Foil seal Patent		
[NASA-CASE-XLE-05130-2]	c15	N71-19570
Generator for a space power system Patent		
[NASA-CASE-XLE-04250]	c09	N71-20446
Method of making electrical contact on silicon solar cell and resultant product Patent		
[NASA-CASE-XLE-04787]	c03	N71-20492
Small plasma probe Patent		
[NASA-CASE-XLE-02578]	c25	N71-20747
Combined electrolysis device and fuel cell and method of operation Patent		
[NASA-CASE-XLE-01645]	c03	N71-20904

Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent  
[NASA-CASE-XLE-00787] c14 N71-21090

Control of transverse instability in rocket combustors Patent  
[NASA-CASE-XLE-04603] c33 N71-21507

High voltage divider system Patent  
[NASA-CASE-XLE-02008] c09 N71-21583

Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c25 N71-21694

Burning rate control of solid propellants Patent  
[NASA-CASE-XLE-03494] c27 N71-21819

Protective device for machine and metalworking tools Patent  
[NASA-CASE-XLE-01092] c15 N71-22797

Cryogenic insulation system Patent  
[NASA-CASE-XLE-04222] c23 N71-22881

Method for producing fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-03925] c18 N71-22894

Thermal shock apparatus Patent  
[NASA-CASE-XLE-02024] c14 N71-22964

Arc electrode of graphite with ball tip Patent  
[NASA-CASE-XLE-04788] c09 N71-22987

Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c05 N71-23080

Automatic recording McLeod gauge Patent  
[NASA-CASE-XLE-03280] c14 N71-23093

Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent  
[NASA-CASE-XLE-04501] c09 N71-23190

High temperature ferromagnetic cobalt-base alloy Patent  
[NASA-CASE-XLE-03629] c17 N71-23248

Induction furnace with perforated tungsten foil shielding Patent  
[NASA-CASE-XLE-04026] c14 N71-23267

Gd or Sm doped silicon semiconductor composition Patent  
[NASA-CASE-XLE-10715] c26 N71-23292

Protection of serially connected solar cells against open circuits by the use of shunting diode Patent  
[NASA-CASE-XLE-04535] c03 N71-23354

Superconducting alternator Patent  
[NASA-CASE-XLE-02823] c09 N71-23443

Silicon solar cell with cover glass bonded to cell by metal pattern Patent  
[NASA-CASE-XLE-08569] c03 N71-23449

Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c06 N71-23527

Thermionic converter with current augmented by self induced magnetic field Patent  
[NASA-CASE-XLE-01903] c22 N71-23599

Semiconductor material and method of making same Patent  
[NASA-CASE-XLE-02798] c26 N71-23654

Insulation system Patent  
[NASA-CASE-XLE-02647] c18 N71-23658

Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c18 N71-23710

Alloys for bearings Patent  
[NASA-CASE-XLE-05033] c15 N71-23810

Extrusion die for refractory metals Patent  
[NASA-CASE-XLE-06773] c15 N71-23817

Combustion chamber Patent  
[NASA-CASE-XLE-04857] c28 N71-23968

Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-10337] c15 N71-24046

Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c17 N71-24142

Thermal radiation shielding Patent  
[NASA-CASE-XLE-03432] c33 N71-24145

Method of attaching a cover glass to a silicon solar cell Patent  
[NASA-CASE-XLE-08569-2] c03 N71-24681

Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c28 N71-24736

Multialarm summary alarm Patent  
[NASA-CASE-XLE-03061-1] c10 N71-24798

Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c15 N71-24836

Flow angle sensor and read out system Patent  
[NASA-CASE-XLE-04503] c14 N71-24864

Shock tube powder dispersing apparatus Patent  
[NASA-CASE-XLE-04946] c17 N71-24911

Pneumatic oscillator Patent  
[NASA-CASE-XLE-10345-1] c10 N71-25899

Heat activated cell with alkali anode and alkali salt electrolyte Patent  
[NASA-CASE-XLE-11358] c03 N71-26084

Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride Patent  
[NASA-CASE-XLE-03940] c18 N71-26153

Ion beam deflector Patent  
[NASA-CASE-XLE-10689-1] c28 N71-26173

Rolling element bearings Patent  
[NASA-CASE-XLE-09527-2] c15 N71-26189

Ion thruster accelerator system Patent  
[NASA-CASE-XLE-10106-1] c28 N71-26642

Propellant feed isolator Patent  
[NASA-CASE-XLE-10210-1] c28 N71-26781

Heat activated cell Patent  
[NASA-CASE-XLE-11359] c03 N71-28579

Process for glass coating an ion accelerator grid Patent  
[NASA-CASE-XLE-10278-1] c15 N71-28582

Fluid jet amplifier Patent  
[NASA-CASE-XLE-09341] c12 N71-28741

Gas core nuclear reactor Patent  
[NASA-CASE-XLE-10250-1] c22 N71-28759

Gas turbine combustor Patent  
[NASA-CASE-XLE-10286-1] c28 N71-28915

Cyclic switch Patent  
[NASA-CASE-XLE-10155-1] c09 N71-29035

Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035] c33 N71-29151

Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c33 N71-29152

Turbo-machine blade vibration damper Patent  
[NASA-CASE-XLE-00155] c28 N71-29154

Corrosion resistant beryllium Patent  
[NASA-CASE-XLE-10327] c17 N71-33408

Integrated thermoelectric generator/space antenna combination  
[NASA-CASE-XER-09521] c09 N72-12136

Sensing probe  
[NASA-CASE-XLE-10281-1] c14 N72-17327

Method of making emf cell  
[NASA-CASE-XLE-11359-2] c03 N72-20034

Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c22 N72-20597

Switching regulator  
[NASA-CASE-XLE-11005-1] c09 N72-21243

Saturation current protection apparatus for saturable core transformers  
[NASA-CASE-XER-10075-2] c09 N72-22196

Pulse coupling circuit  
[NASA-CASE-XLE-10433-1] c09 N72-22197

Solid state remote circuit selector switch  
[NASA-CASE-XLE-10387] c09 N72-22201

Load-insensitive electrical device  
[NASA-CASE-XER-11046] c09 N72-22203

High speed rolling element bearing  
[NASA-CASE-XLE-10856-1] c15 N72-22490

Production of metal powders  
[NASA-CASE-XLE-06461] c17 N72-22530

Nickel base alloy  
[NASA-CASE-XLE-10874-1] c17 N72-22535

Ion thruster magnetic field control  
[NASA-CASE-XLE-10835-1] c28 N72-22771

Electrically conductive fluorocarbon polymer  
[NASA-CASE-XLE-06774-2] c06 N72-25150

Analog Signal to Discrete Time Interval Converter (ASDTIC)  
[NASA-CASE-XER-10048] c09 N72-25251

Controllable load insensitive power converters  
[NASA-CASE-XER-10268] c09 N72-25252

Angular velocity and acceleration measuring apparatus  
[NASA-CASE-XER-10292] c14 N72-25410

Electrical insulating layer process  
[NASA-CASE-XLE-10489-1] c15 N72-25447

Method for producing dispersion strengthened alloys by converting metal to a halide, comminuting, reducing the metal halide to the metal and sintering  
[NASA-CASE-XLE-10450-1] c15 N72-25448

Selective nickel deposition [NASA-CASE-LEW-10965-1]	c15 N72-25452	Apparatus for welding blades to rotors [NASA-CASE-LEW-10533-2]	c37 N74-11300
Method of making fiber composites [NASA-CASE-LEW-10424-2-2]	c18 N72-25539	High powered arc electrodes [NASA-CASE-LEW-11162-1]	c33 N74-12913
Electricity measurement devices employing liquid crystalline materials [NASA-CASE-ERC-10275]	c26 N72-25680	Method of forming articles of manufacture from superalloy powders [NASA-CASE-LEW-10805-2]	c37 N74-13179
Ablative system [NASA-CASE-LEW-10359]	c33 N72-25911	Deposition of alloy films [NASA-CASE-LEW-11262-1]	c27 N74-13270
Inductance device with vacuum insulation [NASA-CASE-LEW-10330-1]	c09 N72-27226	Supersonic-combustion rocket [NASA-CASE-LEW-11058-1]	c20 N74-13502
Apparatus for sensing temperature [NASA-CASE-XLE-05230]	c14 N72-27410	Method of making silicon solar cell array [NASA-CASE-LEW-11069-1]	c44 N74-14784
Apparatus for producing metal powders [NASA-CASE-XLE-06461-2]	c17 N72-28535	Spiral groove seal [NASA-CASE-XLE-10326-4]	c37 N74-15125
Refractory metal base alloy composites [NASA-CASE-XLE-03940-2]	c17 N72-28536	Method of making rolling element bearings [NASA-CASE-LEW-11087-2]	c37 N74-15128
Spiral groove seal [NASA-CASE-XLE-10326-2]	c15 N72-29488	Gas turbine exhaust nozzle [NASA-CASE-LEW-11569-1]	c07 N74-15453
Production of high purity I-123 [NASA-CASE-LEW-10518-1]	c24 N72-33681	Demodulator for carrier transducers [NASA-CASE-NUC-10107-1]	c33 N74-17930
Electrostatic collector for charged particles [NASA-CASE-LEW-11192-1]	c09 N73-13208	Diffusion welding in air [NASA-CASE-LEW-11387-1]	c37 N74-18128
Method of making apparatus for sensing temperature [NASA-CASE-XLE-05230-2]	c14 N73-13417	Airflow control system for supersonic inlets [NASA-CASE-LEW-11188-1]	c02 N74-20646
Method of forming superalloys [NASA-CASE-LEW-10805-1]	c15 N73-13465	Rapidly pulsed, high intensity, incoherent light source [NASA-CASE-XLE-2529-3]	c33 N74-20859
Rocket thrust throttling system [NASA-CASE-LEW-10374-1]	c28 N73-13773	Electromagnetic flow rate meter [NASA-CASE-LEW-10981-1]	c35 N74-21018
Gas turbine engine fuel control [NASA-CASE-LEW-11187-1]	c28 N73-19793	Diffusion welding [NASA-CASE-LEW-11388-2]	c37 N74-21055
Thermocouple tape [NASA-CASE-LEW-11072-1]	c14 N73-24472	Journal bearings [NASA-CASE-LEW-11076-1]	c37 N74-21061
Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias [NASA-CASE-LEW-10920-1]	c17 N73-24569	Glass-to-metal seals comprising relatively high expansion metals [NASA-CASE-LEW-10698-1]	c37 N74-21063
Magneto-plasma-dynamic arc thruster [NASA-CASE-LEW-11180-1]	c25 N73-25760	Hollow rolling element bearings [NASA-CASE-LEW-11087-3]	c37 N74-21064
Ablative system [NASA-CASE-LEW-10359-2]	c33 N73-25952	Low level signal limiter [NASA-CASE-XLE-04791]	c32 N74-22096
Parasitic suppressing circuit [NASA-CASE-ERC-10403-1]	c10 N73-26228	Load insensitive electrical device [NASA-CASE-XER-11046-2]	c33 N74-22864
Twisted multifilament superconductor [NASA-CASE-LEW-11726-1]	c26 N73-26752	Reinforced structural plastics [NASA-CASE-LEW-10199-1]	c27 N74-23125
Ophthalmic method and apparatus [NASA-CASE-LEW-11669-1]	c05 N73-27062	Jet exhaust noise suppressor [NASA-CASE-LEW-11286-1]	c07 N74-27490
Single grid accelerator for an ion thruster [NASA-CASE-XLE-10453-2]	c28 N73-27699	High current electrical lead [NASA-CASE-LEW-10950-1]	c33 N74-27683
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Method and apparatus for measuring electromagnetic radiation [NASA-CASE-LEW-11159-1]	c14 N73-28488	Supersonic fan blading [NASA-CASE-LEW-11402-1]	c07 N74-28226
Welding blades to rotors [NASA-CASE-LEW-10533-1]	c15 N73-28515	Production of pure metals [NASA-CASE-LEW-10906-1]	c25 N74-30502
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[NASA-CASE-LEW-12905-1] c26 N78-18183

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[NASA-CASE-LEW-12452-1] c07 N78-25089

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[NASA-CASE-LEW-11855-1] c07 N78-25090

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[NASA-CASE-LEW-12465-1] c25 N78-25148

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[NASA-CASE-LEW-12185-1] c44 N78-25528

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[NASA-CASE-LEW-12649-1] c44 N78-25530

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[NASA-CASE-LEW-12038-3] c44 N78-25555

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[NASA-CASE-LEW-10518-3] c25 N78-27226

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[NASA-CASE-LEW-11877-1] c34 N78-27357

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[NASA-CASE-LEW-12791-1] c33 N78-32341

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[NASA-CASE-LEW-12496-1] c07 N78-33101

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[NASA-CASE-LEW-12441-1] c34 N79-13289

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[NASA-CASE-LEW-13050-1] c07 N79-14095

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[NASA-CASE-LEW-12389-3] c07 N79-14096

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[NASA-CASE-LEW-12378-1] c07 N79-14097

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[NASA-CASE-LEW-12661-1] c35 N79-14345

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[NASA-CASE-LEW-11583-1] c35 N79-17192

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[NASA-CASE-LEW-12131-1] c37 N79-18318

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[NASA-CASE-LEW-11981-2] c34 N79-20336

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[NASA-CASE-LEW-12513-1] c25 N79-22235

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[NASA-CASE-LEW-12542-2] c26 N79-22271

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[NASA-CASE-LEW-11873-1] c37 N79-22475

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[NASA-CASE-LEW-11890-1] c05 N79-24976

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[NASA-CASE-LEW-12972-1] c44 N79-25481

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[NASA-CASE-LEW-13150-1] c44 N79-26474

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[NASA-CASE-LEW-13169-1] c26 N80-14232

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[NASA-CASE-LEW-12971-1] c07 N80-18039

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[NASA-CASE-NPO-12131-3] c37 N80-18400

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[NASA-CASE-LEW-12723-1] c52 N80-18690

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[NASA-CASE-LEW-12296-1] c33 N80-19425

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[NASA-CASE-LEW-12081-2] c28 N80-20402

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[NASA-CASE-LEW-13027-1] c27 N80-24437

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[NASA-CASE-LEW-13268-1] c37 N80-24619

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[NASA-CASE-LEW-13343-1] c24 N80-26389

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[NASA-CASE-LEW-12876-1] c27 N80-26447

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[NASA-CASE-LEW-12119-1] c37 N80-28711

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[NASA-CASE-LEW-12274-1] c37 N80-31790

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[NASA-CASE-LEW-12542-3] c26 N80-32484

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[NASA-CASE-LEW-13103-1] c27 N80-32516

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[NASA-CASE-LEW-12806-2] c44 N81-12542

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[NASA-CASE-LEW-12081-3] c28 N81-14103

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[NASA-CASE-LEW-12941-1] c31 N81-16329

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[NASA-CASE-LEW-13400-1] c44 N81-16528

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Curing agent for polyepoxides and epoxy resins  
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[NASA-CASE-LEW-13226-1] c27 N81-17260

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 [NASA-CASE-LEW-12907-2] c07 N81-19115  
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 [NASA-CASE-LEW-12594-2] c07 N81-19116  
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 [NASA-CASE-LEW-12590-1] c25 N81-19245  
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 [NASA-CASE-LEW-12933-1] c27 N81-19296  
 Method of cold welding using ion beam technology  
 [NASA-CASE-LEW-12982-1] c37 N81-19455  
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 [NASA-CASE-LEW-12443-1] c44 N81-19561  
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 [NASA-CASE-LEW-13269-1] c27 N81-22190  
 Heat pipes containing alkali metal working fluid  
 [NASA-CASE-LEW-12253-1] c34 N81-22310  
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 [NASA-CASE-LEW-12445-1] c37 N81-22360  
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 [NASA-CASE-LEW-13135-2] c27 N81-24257  
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 [NASA-CASE-LEW-13359-1] c27 N81-24265  
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 [NASA-CASE-LEW-13570-1] c33 N81-24348  
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 [NASA-CASE-LEW-12991-1] c37 N81-24442  
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 [NASA-CASE-LEW-12441-3] c44 N81-24519  
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 [NASA-CASE-LEW-12918-1] c44 N81-24521  
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 [NASA-CASE-LEW-13088-1] c26 N81-25188  
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 [NASA-CASE-LEW-12493-2] c24 N81-26179  
 Zirconium carbide as an electrocatalyst for the chromous/chromic redox couple  
 [NASA-CASE-LEW-13246-1] c25 N81-26203  
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 [NASA-CASE-LEW-12119-2] c37 N81-26447  
 Ion sputter textured graphite  
 [NASA-CASE-LEW-12919-1] c24 N81-27198  
 Cross-linked polyvinyl alcohol and method of making same  
 [NASA-CASE-LEW-13504-1] c27 N81-27279  
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 [NASA-CASE-LEW-13286-1] c44 N81-27597  
 Heat transparent high intensity high efficiency solar cell  
 [NASA-CASE-LEW-12892-1] c44 N81-27598  
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 [NASA-CASE-LEW-13556-1] c44 N81-27615  
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 [NASA-CASE-LEW-13107-1] c52 N81-27786  
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 [NASA-CASE-LEW-12990-1] c07 N81-29129  
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 [NASA-CASE-LEW-13148-2] c44 N81-29524  
 Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
 [NASA-CASE-LEW-13102-1] c44 N81-29531  
 Castable high temperature refractory materials  
 [NASA-CASE-LEW-13080-2] c27 N82-11210  
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 [NASA-CASE-LEW-12950-1] c34 N82-11399  
 Modified face seal for positive film stiffness  
 [NASA-CASE-LEW-12989-1] c37 N82-12442  
**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.**  
**MANNED SPACECRAFT CENTER, CAPE CANAVERAL, FLA.**  
 Electrode for biological recording  
 [NASA-CASE-XMS-02872] c05 N69-21925  
**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.**  
**MANNED SPACECRAFT CENTER, LANGLEY STATION, VA.**  
 Plural recorder system  
 [NASA-CASE-XMS-06949] c09 N69-21467  
**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.**  
**MARSHALL SPACE FLIGHT CENTER, HUNTSVILLE, ALA.**  
 Electrical feed-through connection for printed circuit boards and printed cable  
 [NASA-CASE-XMF-01483] c14 N69-27431  
 Method for detecting hydrogen gas  
 [NASA-CASE-XMF-03873] c06 N69-39733  
 Electrical connector Patent Application  
 [NASA-CASE-XMF-14741] c09 N70-20737  
 Angular measurement system Patent  
 [NASA-CASE-XMF-00447] c14 N70-33179  
 Insulating structure Patent  
 [NASA-CASE-XMF-00341] c15 N70-33323  
 Space vehicle electrical system Patent  
 [NASA-CASE-XMF-00517] c03 N70-34157  
 Pivotal shock absorbing pad assembly Patent  
 [NASA-CASE-XMF-03856] c31 N70-34159  
 Gimbaled, partially submerged rocket nozzle Patent  
 [NASA-CASE-XMF-01544] c28 N70-34162  
 Recoverable rocket vehicle Patent  
 [NASA-CASE-XMF-00389] c31 N70-34176  
 Electrical discharge apparatus for forming Patent  
 [NASA-CASE-XMF-00375] c15 N70-34249  
 Optical inspection apparatus Patent  
 [NASA-CASE-XMF-00462] c14 N70-34298  
 Relay binary circuit Patent  
 [NASA-CASE-XMF-00421] c09 N70-34502  
 Attitude and propellant flow control system and method Patent  
 [NASA-CASE-XMF-00185] c21 N70-34539  
 Electrical connector for flat cables Patent  
 [NASA-CASE-XMF-00324] c09 N70-34596  
 Externally pressurized fluid bearing Patent  
 [NASA-CASE-XMF-00515] c15 N70-34664  
 Force measuring instrument Patent  
 [NASA-CASE-XMF-00456] c14 N70-34705  
 Seismic displacement transducer Patent  
 [NASA-CASE-XMF-00479] c14 N70-34794  
 Electric arc welding Patent  
 [NASA-CASE-XMF-00392] c15 N70-34814  
 Assembly for recovering a capsule Patent  
 [NASA-CASE-XMF-00641] c31 N70-36410  
 Printed cable connector Patent  
 [NASA-CASE-XMF-00369] c09 N70-36494  
 Landing pad assembly for aerospace vehicles Patent  
 [NASA-CASE-XMF-02853] c31 N70-36654  
 Electric arc driven wind tunnel Patent  
 [NASA-CASE-XMF-00411] c11 N70-36913  
 Gravity device Patent  
 [NASA-CASE-XMF-00424] c11 N70-38196  
 Injector for bipropellant rocket engines Patent  
 [NASA-CASE-XMF-00148] c28 N70-38710  
 Electronic motor control system Patent  
 [NASA-CASE-XMF-01129] c09 N70-38712  
 Sloss suppressing device and method Patent  
 [NASA-CASE-XMF-00658] c12 N70-38997  
 Air bearing Patent  
 [NASA-CASE-XMF-00339] c15 N70-39896  
 Instrument support with precise lateral adjustment Patent  
 [NASA-CASE-XMF-00480] c14 N70-39898  
 Segmented back-up bar Patent  
 [NASA-CASE-XMF-00640] c15 N70-39924  
 Collapsible loop antenna for space vehicle Patent  
 [NASA-CASE-XMF-00437] c07 N70-40202  
 Flexible back-up bar Patent  
 [NASA-CASE-XMF-00722] c15 N70-40204  
 Electro-optical alignment control system Patent  
 [NASA-CASE-XMF-00908] c14 N70-40238  
 Missile launch release system Patent  
 [NASA-CASE-XMF-03198] c30 N70-40353  
 Double-acting shock absorber Patent  
 [NASA-CASE-XMF-01045] c15 N70-40354  
 Portable alignment tool Patent  
 [NASA-CASE-XMF-01452] c15 N70-41371  
 Device for suppressing sound and heat produced by high-velocity exhaust jets Patent  
 [NASA-CASE-XMF-01813] c28 N70-41582  
 Unfired-ceramic flame-resistant insulation and method of making the same Patent  
 [NASA-CASE-XMF-01030] c18 N70-41583  
 Pulse counting circuit which simultaneously indicates the occurrence of the nth pulse Patent  
 [NASA-CASE-XMF-00906] c09 N70-41655

Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c11 N70-41677

Locking device with rolling detents Patent  
[NASA-CASE-XMF-01371] c15 N70-41829

Tank construction for space vehicles Patent  
[NASA-CASE-XMF-01899] c31 N70-41948

Positive displacement flowmeter Patent  
[NASA-CASE-XMF-02822] c14 N70-41994

Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c11 N71-10604

Fiber optic vibration transducer and analyzer Patent  
[NASA-CASE-XMF-02433] c14 N71-10616

Method and means for damping nutation in a satellite Patent  
[NASA-CASE-XMF-00442] c31 N71-10747

Heat pipe thermionic diode power system Patent  
[NASA-CASE-XMF-05843] c03 N71-11055

Synthesis of siloxane-containing epoxy polymers Patent  
[NASA-CASE-MFS-13994-1] c06 N71-11240

Bi-carrier demodulator with modulation Patent  
[NASA-CASE-XMF-01160] c07 N71-11298

Harness assembly Patent  
[NASA-CASE-MFS-14671] c05 N71-12341

Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c08 N71-12504

Pulse amplitude and width detector Patent  
[NASA-CASE-XMF-06519] c09 N71-12519

Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c09 N71-13486

Hybrid holographic system using reflected and transmitted object beams simultaneously Patent  
[NASA-CASE-MFS-20074] c16 N71-15565

Reactance control system Patent  
[NASA-CASE-XMF-01598] c21 N71-15583

Apparatus for welding torch angle and seam tracking control Patent  
[NASA-CASE-XMF-03287] c15 N71-15607

Multivortex valve system Patent  
[NASA-CASE-XMF-04709] c15 N71-15609

Injector assembly for liquid fueled rocket engines Patent  
[NASA-CASE-XMF-00968] c28 N71-15660

Space capsule ejection assembly Patent  
[NASA-CASE-XMF-03169] c31 N71-15675

Air cushion lift pad Patent  
[NASA-CASE-MFS-14685] c31 N71-15689

Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c15 N71-15986

Regenerative braking system Patent  
[NASA-CASE-XMF-01096] c10 N71-16030

Condition and condition duration indicator Patent  
[NASA-CASE-XMF-01097] c10 N71-16058

Method and apparatus for securing to a spacecraft Patent  
[NASA-CASE-MFS-11133] c31 N71-16222

Method and apparatus of simulating zero gravity conditions Patent  
[NASA-CASE-MFS-12750] c27 N71-16223

Passive optical wind and turbulence detection system Patent  
[NASA-CASE-XMF-14032] c20 N71-16340

Serpentuator Patent  
[NASA-CASE-XMF-05344] c31 N71-16345

Gravimeter Patent  
[NASA-CASE-XMF-05844] c14 N71-17587

High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c14 N71-17588

Burst diaphragm flow initiator Patent  
[NASA-CASE-MFS-12915] c11 N71-17600

Vacuum deposition apparatus Patent  
[NASA-CASE-XMF-01667] c15 N71-17647

Quick disconnect latch and handle combination Patent  
[NASA-CASE-MFS-11132] c15 N71-17649

Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c15 N71-17650

Low temperature flexure fatigue cryostat Patent  
[NASA-CASE-XMF-02964] c14 N71-17659

Precision stepping drive Patent  
[NASA-CASE-MFS-14772] c15 N71-17692

Multi-mission module Patent  
[NASA-CASE-XMF-01543] c31 N71-17730

Ratchet mechanism Patent  
[NASA-CASE-MFS-12805] c15 N71-17805

Method of making impurity-type semiconductor electrical contacts Patent  
[NASA-CASE-XMF-01016] c26 N71-17818

Apparatus for the determination of the existence or non-existence of a bonding between two members Patent  
[NASA-CASE-MFS-13686] c15 N71-18132

Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c08 N71-18752

Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c11 N71-18773

Space manufacturing machine Patent  
[NASA-CASE-MFS-20410] c15 N71-19214

Extensometer Patent  
[NASA-CASE-XMF-04680] c15 N71-19489

Mechanical simulator of low gravity conditions Patent  
[NASA-CASE-MFS-10555] c11 N71-19494

Weld control system using thermocouple wire Patent  
[NASA-CASE-MFS-06074] c15 N71-20393

Evaporant source for vapor deposition Patent  
[NASA-CASE-XMF-06065] c15 N71-20395

Satellite despin device Patent  
[NASA-CASE-XMF-08523] c31 N71-20396

Method of coating circuit paths on printed circuit boards with solder Patent  
[NASA-CASE-XMF-01599] c09 N71-20705

Elastomeric silazane polymers and process for preparing the same Patent  
[NASA-CASE-XMF-04133] c06 N71-20717

Method of producing alternating ether siloxane copolymers Patent  
[NASA-CASE-XMF-02584] c06 N71-20905

Honeycomb panel and method of making same Patent  
[NASA-CASE-XMF-01402] c18 N71-21651

Portable milling tool Patent  
[NASA-CASE-XMF-03511] c15 N71-22799

Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c15 N71-22877

Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c28 N71-22983

Adaptive tracking notch filter system Patent  
[NASA-CASE-XMF-01892] c10 N71-22986

Meteorological balloon Patent  
[NASA-CASE-XMF-04163] c02 N71-23007

Continuous turning slip ring assembly Patent  
[NASA-CASE-XMF-01049] c15 N71-23049

Automatic welding speed controller Patent  
[NASA-CASE-XMF-01730] c15 N71-23050

Positive dc to positive dc converter Patent  
[NASA-CASE-XMF-14301] c09 N71-23188

Zero gravity apparatus Patent  
[NASA-CASE-XMF-06515] c14 N71-23227

Positive dc to negative dc converter Patent  
[NASA-CASE-XMF-08217] c03 N71-23239

Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c15 N71-23256

Azimuth laying system Patent  
[NASA-CASE-XMF-01669] c21 N71-23289

Electron beam instrument for measuring electric fields Patent  
[NASA-CASE-XMF-10289] c14 N71-23699

Anemometer with braking mechanism Patent  
[NASA-CASE-XMF-05224] c14 N71-23726

Apparatus for testing a pressure responsive instrument Patent  
[NASA-CASE-XMF-04134] c14 N71-23755

Electric welding torch Patent  
[NASA-CASE-XMF-02330] c15 N71-23798

Swivel support for gas bearings Patent  
[NASA-CASE-XMF-07808] c15 N71-23812

Welding skate with computerized control Patent  
[NASA-CASE-XMF-07069] c15 N71-23815

Docking structure for spacecraft Patent  
[NASA-CASE-XMF-05941] c31 N71-23912

High pressure helium purifier Patent  
[NASA-CASE-XMF-06888] c15 N71-24044

Horizontal cryostat for fatigue testing Patent  
[NASA-CASE-XMF-10968] c14 N71-24234

Method for leakage testing of tanks Patent  
[NASA-CASE-XMF-02392] c32 N71-24285

Internal flare angle gauge Patent  
[NASA-CASE-XMF-04415] c14 N71-24693

Pulse rise time and amplitude detector Patent  
[NASA-CASE-XMF-08804] c09 N71-24717

System for maintaining a motor at a predetermined speed utilizing digital feedback means Patent  
[NASA-CASE-XMF-06892] c09 N71-24805



Power system with heat pipe liquid coolant lines Patent			Optical probing of supersonic flows with statistical correlation		
[NASA-CASE-MFS-14114-2]	c09	N71-24807	[NASA-CASE-MFS-20642]	c14	N72-21407
Magnetomotive metal working device Patent			Mechanically actuated triggered hand		
[NASA-CASE-XMF-03793]	c15	N71-24833	[NASA-CASE-MFS-20413]	c15	N72-21463
Apparatus for determining the deflection of an electron beam impinging on a target Patent			Hermetically sealed elbow actuator		
[NASA-CASE-XMF-06617]	c09	N71-24843	[NASA-CASE-MFS-14710]	c09	N72-22195
Transistor servo system including a unique differential amplifier circuit Patent			Shielded flat cable		
[NASA-CASE-XMF-05195]	c10	N71-24861	[NASA-CASE-MFS-13687-2]	c09	N72-22198
RC rate generator for slow speed measurement Patent			Shock wave convergence apparatus		
[NASA-CASE-XMF-02966]	c10	N71-24863	[NASA-CASE-MFS-20890]	c14	N72-22439
Method and apparatus for precision sizing and joining of large diameter tubes Patent			Bonding of reinforced Teflon to metals		
[NASA-CASE-XMF-05114-3]	c15	N71-24865	[NASA-CASE-MFS-20482]	c15	N72-22492
Duct coupling for single-banded operation Patent			Inorganic thermal control coatings		
[NASA-CASE-MFS-20395]	c15	N71-24903	[NASA-CASE-MFS-20011]	c18	N72-22566
Brushless direct current tachometer Patent			High temperature furnace for melting materials in space		
[NASA-CASE-MFS-20385]	c09	N71-24904	[NASA-CASE-MFS-20710]	c11	N72-23215
Self-lubricating gears and other mechanical parts Patent			Siloxane containing epoxide compounds		
[NASA-CASE-MFS-14971]	c15	N71-24984	[NASA-CASE-MFS-13994-2]	c06	N72-25148
Pulse width inverter Patent			Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups		
[NASA-CASE-MFS-10068]	c10	N71-25139	[NASA-CASE-MFS-20979]	c06	N72-25151
Isothermal cover with thermal reservoirs Patent			Emergency lunar communications system		
[NASA-CASE-MFS-20355]	c33	N71-25353	[NASA-CASE-MFS-21042]	c07	N72-25171
Storage container for electronic devices Patent			Lead attachment to high temperature devices		
[NASA-CASE-MFS-20075]	c09	N71-26133	[NASA-CASE-ERC-10224]	c09	N72-25261
Method and apparatus for precision sizing and joining of large diameter tubes Patent			Device for measuring bearing preload		
[NASA-CASE-XMF-05114-2]	c15	N71-26148	[NASA-CASE-MFS-20434]	c11	N72-25288
Filter system for control of outgas contamination in vacuum Patent			Altitude simulation chamber for rocket engine testing		
[NASA-CASE-MFS-14711]	c15	N71-26185	[NASA-CASE-MFS-20620]	c11	N72-27262
Image magnification adapter for cameras Patent			Fixture for supporting articles during vibration tests		
[NASA-CASE-XMF-03844-1]	c14	N71-26474	[NASA-CASE-MFS-20523]	c14	N72-27412
Thickness measuring and injection device Patent			Electrical connector		
[NASA-CASE-MFS-20261]	c14	N71-27005	[NASA-CASE-MFS-20757]	c09	N72-28225
Personal propulsion unit Patent			Remote control manipulator for zero gravity environment		
[NASA-CASE-MFS-20130]	c28	N71-27585	[NASA-CASE-MFS-14405]	c15	N72-28495
Power system with heat pipe liquid coolant lines Patent			Thermal compensating structural member		
[NASA-CASE-MFS-14114]	c33	N71-27862	[NASA-CASE-MFS-20433]	c15	N72-28496
Method of making shielded flat cable Patent			Semiconductor transducer device		
[NASA-CASE-MFS-13687]	c09	N71-28691	[NASA-CASE-ERC-10087-2]	c14	N72-31446
A dc motor speed control system Patent			Coaxial high density, hypervelocity plasma generator and accelerator with ionizable metal disc		
[NASA-CASE-MFS-14610]	c09	N71-28886	[NASA-CASE-MFS-20589]	c25	N72-32688
Cryogenic thermal insulation Patent			Process for the preparation of brushite crystals		
[NASA-CASE-XMF-05046]	c33	N71-28892	[NASA-CASE-ERC-10338]	c04	N72-33072
Method of coating through-holes Patent			Adjustable force probe		
[NASA-CASE-XMF-05999]	c15	N71-29032	[NASA-CASE-MFS-20760]	c14	N72-33377
Response analyzers for sensors Patent			Polyimide resin-fiberglass cloth laminates for printed circuit boards		
[NASA-CASE-MFS-11204]	c14	N71-29134	[NASA-CASE-MFS-20408]	c18	N73-12604
Current regulating voltage divider			Differential pressure control		
[NASA-CASE-MFS-20935]	c09	N71-34212	[NASA-CASE-MFS-14216]	c14	N73-13418
Nuclear mass flowmeter			Redundant hydraulic control system for actuators		
[NASA-CASE-MFS-20485]	c14	N72-11365	[NASA-CASE-MFS-20944]	c15	N73-13466
Fine adjustment mount			Device and method for determining X ray reflection efficiency of optical surfaces		
[NASA-CASE-MFS-20249]	c15	N72-11386	[NASA-CASE-MFS-20243]	c23	N73-13662
Method of making foamed materials in zero gravity			Process for making diamonds		
[NASA-CASE-XMF-09902]	c15	N72-11387	[NASA-CASE-MFS-20698-2]	c15	N73-19457
Air bearing assembly for curved surfaces			Test stand system for vacuum chambers		
[NASA-CASE-MFS-20423]	c15	N72-11388	[NASA-CASE-MFS-21362]	c11	N73-20267
Stud-bonding gun			Material fatigue testing system		
[NASA-CASE-MFS-20299]	c15	N72-11392	[NASA-CASE-MFS-20673]	c14	N73-20476
Apparatus for obtaining isotropic irradiation of a specimen			Ratemeter		
[NASA-CASE-MFS-20095]	c24	N72-11595	[NASA-CASE-MFS-20418]	c14	N73-24473
Wind tunnel test section			Underwater space suit pressure control regulator		
[NASA-CASE-MFS-20509]	c11	N72-17183	[NASA-CASE-MFS-20332-2]	c05	N73-25125
Multiple image storing system for high speed projectile holography			Maxometers (peak wind speed anemometers)		
[NASA-CASE-MFS-20596]	c14	N72-17324	[NASA-CASE-MFS-20916]	c14	N73-25460
Method of manufacturing semiconductor devices using refractory dielectrics			Monitoring deposition of films		
[NASA-CASE-XER-08476-1]	c26	N72-17820	[NASA-CASE-MFS-20675]	c26	N73-26751
Underwater space suit pressure control regulator			Docking structure for spacecraft		
[NASA-CASE-MFS-20332]	c05	N72-20097	[NASA-CASE-MFS-20863]	c31	N73-26876
Apparatus for making diamonds			Wide temperature range electronic device with lead attachment		
[NASA-CASE-MFS-20698]	c15	N72-20446	[NASA-CASE-ERC-10224-2]	c09	N73-27150
An airlock			Restraint system for ergometer		
[NASA-CASE-MFS-20922]	c31	N72-20840	[NASA-CASE-MFS-21046-1]	c14	N73-27377
Photoetching of metal-oxide layers			Apparatus and method for skin packaging articles		
[NASA-CASE-ERC-10108]	c06	N72-21094	[NASA-CASE-MFS-20855]	c15	N73-27405
Liquid aerosol dispenser			Ergometer		
[NASA-CASE-MFS-20829]	c12	N72-21310	[NASA-CASE-MFS-21109-1]	c05	N73-27941
			Tilting table for ergometer and for other biomedical devices		



[NASA-CASE-MFS-21010-1]	c05 N73-30078	Sprag solenoid brake	
Measurement system		[NASA-CASE-MFS-21846-1]	c37 N74-26976
[NASA-CASE-MFS-20658-1]	c14 N73-30386	Device for configuring multiple leads	
Collimator of multiple plates with axially		[NASA-CASE-MFS-22133-1]	c33 N74-26977
aligned identical random arrays of apertures		Thrust-isolating mounting	
[NASA-CASE-MFS-20546-2]	c14 N73-30389	[NASA-CASE-MFS-21680-1]	c18 N74-27397
Holographic thin film analyzer		Battery testing device	
[NASA-CASE-MFS-20823-1]	c16 N73-30476	[NASA-CASE-MFS-20761-1]	c44 N74-27519
Semiconductor surface protection material		Apparatus for establishing flow of a fluid mass	
[NASA-CASE-RRC-10339-1]	c18 N73-30532	having a known velocity	
Polymerizable disilanolis having in-chain		[NASA-CASE-MFS-21424-1]	c34 N74-27730
perfluoroalkyl groups		Apparatus for conducting flow electrophoresis in	
[NASA-CASE-MFS-20979-2]	c06 N73-32030	the substantial absence of gravity	
Redundant speed control for brushless Hall		[NASA-CASE-MFS-21394-1]	c34 N74-27744
effect motor		Steady state thermal radiometers	
[NASA-CASE-MFS-20207-1]	c09 N73-32107	[NASA-CASE-MFS-21108-1]	c34 N74-27861
Induction motor control system with voltage		Conductive elastomeric extensometer	
controlled oscillator circuit		[NASA-CASE-MFS-21049-1]	c52 N74-27864
[NASA-CASE-MFS-21465-1]	c10 N73-32145	Device for measuring tensile forces	
Synthesis of superconducting compounds by		[NASA-CASE-MFS-21728-1]	c35 N74-27865
explosive compaction of powders		Three mirror glancing incidence system for X-ray	
[NASA-CASE-MFS-20861-1]	c18 N73-32437	telescope	
Ultrasonic scanner for radial and flat panels		[NASA-CASE-MFS-21372-1]	c74 N74-27866
[NASA-CASE-MFS-20335-1]	c35 N74-10415	Flame detector operable in presence of proton	
Digital computing cardiachometer		radiation	
[NASA-CASE-MFS-20284-1]	c52 N74-12778	[NASA-CASE-MFS-21577-1]	c19 N74-29410
Integrated circuit package with lead structure		Integrated P-channel MOS gyrator	
and method of preparing the same		[NASA-CASE-MFS-22343-1]	c33 N74-34638
[NASA-CASE-MFS-21374-1]	c33 N74-12951	System for depositing thin films	
Vee-notching device		[NASA-CASE-MFS-20775-1]	c31 N75-12161
[NASA-CASE-MFS-20730-1]	c39 N74-13131	Ultrasonic bone densitometer	
Ultrasonic scanning system for in-place		[NASA-CASE-MFS-20994-1]	c35 N75-12271
inspection of brazed tube joints		Strain gauge ambiguity sensor for segmented	
[NASA-CASE-MFS-20767-1]	c38 N74-15130	mirror active optical system	
Method and apparatus for checking the stability		[NASA-CASE-MFS-20506-1]	c35 N75-12273
of a setup for making reflection type holograms		Orthotic arm joint	
[NASA-CASE-MFS-21455-1]	c35 N74-15146	[NASA-CASE-MFS-21611-1]	c54 N75-12616
Method and apparatus for nondestructive testing		Automatically operable self-leveling	
[NASA-CASE-MFS-21233-1]	c38 N74-15395	load table	
Real time moving scene holographic camera system		[NASA-CASE-MFS-22039-1]	c09 N75-12968
[NASA-CASE-MFS-21087-1]	c35 N74-17153	Phase-locked servo system	
Nonflammable coating compositions		[NASA-CASE-MFS-22073-1]	c33 N75-13139
[NASA-CASE-MFS-20486-2]	c27 N74-17283	Self-energized plasma compressor	
Metering gun for dispensing precisely measured		[NASA-CASE-MFS-22145-1]	c75 N75-13625
charges of fluid		Clear air turbulence detector	
[NASA-CASE-MFS-21163-1]	c54 N74-17853	[NASA-CASE-MFS-21244-1]	c36 N75-15028
Omnidirectional wheel		Variable frequency inverter for ac induction	
[NASA-CASE-MFS-21309-1]	c37 N74-18125	motors with torque, speed and braking control	
Reinforced polyquinoxaline gasket and method of		[NASA-CASE-MFS-22088-1]	c33 N75-15874
preparing the same		Leak detector	
[NASA-CASE-MFS-21364-1]	c37 N74-18126	[NASA-CASE-MFS-21761-1]	c35 N75-15931
Manual actuator		Ergometer calibrator	
[NASA-CASE-MFS-21481-1]	c37 N74-16127	[NASA-CASE-MFS-21045-1]	c35 N75-15932
Cryogenic gyroscope housing		Space vehicle	
[NASA-CASE-MFS-21136-1]	c35 N74-18323	[NASA-CASE-MFS-22734-1]	c18 N75-19329
Automatic frequency control for FM transmitter		Meter for use in detecting tension in straps	
[NASA-CASE-MFS-21540-1]	c32 N74-15790	having predetermined elastic characteristics	
Microwave power transmission system wherein		[NASA-CASE-MFS-22189-1]	c35 N75-19615
level of transmitted power is controlled by		Multiplate focusing collimator	
reflections from receiver		[NASA-CASE-MFS-20932-1]	c35 N75-19616
[NASA-CASE-MFS-21470-1]	c44 N74-19870	Latching device	
Reduced gravity fecal collector seat and urinal		[NASA-CASE-MFS-21606-1]	c37 N75-19685
[NASA-CASE-MFS-22102-1]	c54 N74-20725	Internally supported flexible duct joint	
Metabolic analyzer		[NASA-CASE-MFS-19193-1]	c37 N75-19686
[NASA-CASE-MFS-21415-1]	c52 N74-20728	Pseudo-noise test set for communication system	
Automatic quadrature control and measuring system		evaluation	
[NASA-CASE-MFS-21660-1]	c35 N74-21017	[NASA-CASE-MFS-22671-1]	c35 N75-21582
Thiophenyl ether disiloxanes and trisiloxanes		Device for use in loading tension members	
useful as lubricant fluids		[NASA-CASE-MFS-21488-1]	c14 N75-24794
[NASA-CASE-MFS-22411-1]	c37 N74-21058	Holographic system for nondestructive testing	
Airlock		[NASA-CASE-MFS-21704-1]	c35 N75-25124
[NASA-CASE-MFS-20922-1]	c18 N74-22136	Hole cutter	
Low distortion automatic phase control circuit		[NASA-CASE-MFS-22649-1]	c37 N75-25186
[NASA-CASE-MFS-21671-1]	c33 N74-22885	Apparatus for calibrating an image dissector tube	
Two speed drive system		[NASA-CASE-MFS-22208-1]	c33 N75-26244
[NASA-CASE-MFS-20645-1]	c37 N74-23070	Method of determining bond quality of power	
Insert facing tool		transistors attached to substrates	
[NASA-CASE-MFS-21485-1]	c37 N74-25968	[NASA-CASE-MFS-21931-1]	c37 N75-26372
LC-oscillator with automatic stabilized		Anti-gravity device	
amplitude via bias current control		[NASA-CASE-MFS-22758-1]	c70 N75-26789
[NASA-CASE-MFS-21698-1]	c33 N74-26732	Brazing alloy binder	
Device for monitoring a change in mass in		[NASA-CASE-MFS-05868]	c26 N75-27125
varying gravimetric environments		Brazing alloy composition	
[NASA-CASE-MFS-21556-1]	c35 N74-26945	[NASA-CASE-MFS-06053]	c26 N75-27126
Holography utilizing surface plasmon resonances		Refractory porcelain enamel passive control	
[NASA-CASE-MFS-22040-1]	c35 N74-26946	coating for high temperature alloys	
Electrophoretic sample insertion		[NASA-CASE-MFS-22324-1]	c27 N75-27160
[NASA-CASE-MFS-21395-1]	c25 N74-26948	Real time, large volume, moving scene	
		holographic camera system	
		[NASA-CASE-MFS-22537-1]	c35 N75-27328

Method and apparatus for vibration analysis utilizing the Mossbauer effect  
[NASA-CASE-MFS-05882] c35 N75-27329

Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c24 N75-28135

Carbon monoxide monitor  
[NASA-CASE-MFS-22060-1] c35 N75-29380

Perfluoro alkylene dioxy-bis-(4-phthalic anhydrides and oxy-bis-(perfluoroalkyleneoxyphthalic anhydrides  
[NASA-CASE-MFS-22356-1] c23 N75-30256

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[NASA-CASE-MFS-22342-1] c33 N75-30428

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[NASA-CASE-MFS-21616-1] c33 N75-30429

Solar energy power system  
[NASA-CASE-MFS-21628-1] c44 N75-32581

System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c37 N75-33395

Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c37 N76-14460

Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c37 N76-14463

Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c44 N76-14595

Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c44 N76-14601

Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c75 N76-14931

Polyimides of ether-linked aryl tetracarboxylic dianhydrides  
[NASA-CASE-MFS-22355-1] c23 N76-15268

Remotely operable articulated manipulator  
[NASA-CASE-MFS-22707-1] c37 N76-15457

Remote manipulator system  
[NASA-CASE-MFS-22022-1] c37 N76-15460

Thermoelectric power system  
[NASA-CASE-MFS-22002-1] c44 N76-16612

Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c75 N76-17951

Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c26 N76-18257

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[NASA-CASE-MFS-22938-1] c34 N76-18374

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[NASA-CASE-MFS-23047-1] c37 N76-18454

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Deployable flexible tunnel  
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Solar energy absorber  
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Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MFS-23099-1] c09 N76-23273

Solar energy power system  
[NASA-CASE-MFS-21628-2] c44 N76-23675

Solar energy trap  
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Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c04 N76-26175

Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c44 N76-27664

Thermal energy storage system  
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Aircraft-mounted crash-activated transmitter device  
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[NASA-CASE-MFS-20855-1] c15 N77-10112

Attitude control system  
[NASA-CASE-MFS-22787-1] c15 N77-10113

Heat exchanger  
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Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493

Photovoltaic cell array  
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Mechanical thermal motor  
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Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c33 N77-14335

Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c52 N77-14735

Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c33 N77-17351

Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c35 N77-17426

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[NASA-CASE-MFS-23303-1] c32 N77-18307

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[NASA-CASE-MFS-15218-1] c37 N77-19457

Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c35 N77-20401

Emergency descent device  
[NASA-CASE-MFS-23074-1] c54 N77-21844

Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c35 N77-22450

Combined docking and grasping device  
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Method of growing composites of the type exhibiting the Soret effect  
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Method for measuring biaxial stress in a body subjected to stress inducing loads  
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Method for attaching a fused-quartz mirror to a conductive metal substrate  
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Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c27 N77-30237

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[NASA-CASE-MFS-19287-1] c34 N77-30399

Tachometer  
[NASA-CASE-MFS-23175-1] c35 N77-30436

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[NASA-CASE-MFS-23118-1] c35 N77-31465

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[NASA-CASE-MFS-23001-1] c76 N77-32919

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[NASA-CASE-MFS-23280-1] c33 N78-10376

Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c33 N78-13320

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Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c74 N78-15880

Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c35 N78-17357

Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c36 N78-17366

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[NASA-CASE-MFS-23311-1] c54 N78-17676

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[NASA-CASE-MFS-23008-1] c35 N78-18390

Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c24 N78-24290

Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction

[NASA-CASE-MFS-23315-1]	c76 N78-24950	Calibrating pressure switch	
Tetherline system for orbiting satellites		[NASA-CASE-XMF-04494-1]	c33 N79-33392
[NASA-CASE-MFS-23564-1]	c15 N78-25119	Passive propellant system	
Secure communication system		[NASA-CASE-MFS-23642-1]	c20 N80-10278
[NASA-CASE-MSC-16462-1]	c32 N78-25274	Electrophoretic fractional elution apparatus	
Method and apparatus for conditioning of		employing a rotational seal fraction collector	
nickel-cadmium batteries		[NASA-CASE-MFS-23284-1]	c37 N80-14397
[NASA-CASE-MFS-23270-1]	c44 N78-25531	Coal-shale interface detection system	
Passive propellant system		[NASA-CASE-MFS-23720-2]	c43 N80-14423
[NASA-CASE-MFS-23642-2]	c20 N78-27176	Solar concentrator	
Field effect transistor and method of		[NASA-CASE-MFS-23727-1]	c44 N80-14473
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[NASA-CASE-MFS-23312-1]	c33 N78-27326	selective absorption of solar energy	
Plasma cleaning device		[NASA-CASE-MFS-23518-3]	c44 N80-16452
[NASA-CASE-MFS-22966-1]	c75 N78-27913	Method for separating biological cells	
Process for spinning flame retardant elastomeric		[NASA-CASE-MFS-23883-1]	c51 N80-16715
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[NASA-CASE-MSC-14331-3]	c27 N78-32262	[NASA-CASE-MFS-23828-1]	c33 N80-17359
Velocity measurement system		Oceanic wave measurement system	
[NASA-CASE-MFS-23363-1]	c35 N78-32396	[NASA-CASE-MFS-23862-1]	c48 N80-18667
Hybrid holographic non-destructive test system		Wind wheel electric power generator	
[NASA-CASE-MFS-23114-1]	c38 N78-32447	[NASA-CASE-MFS-23515-1]	c44 N80-21828
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[NASA-CASE-MFS-22234-1]	c32 N79-10264	controlled microstructure by directional	
Method of obtaining intensified image from		solidification under dopant-induced interface	
developed photographic films and plates		breakdown	
[NASA-CASE-MFS-23461-1]	c35 N79-10389	[NASA-CASE-MFS-23816-1]	c26 N80-23419
Computerized system for translating a torch head		Coal-shale interface detector	
[NASA-CASE-MFS-23620-1]	c37 N79-10421	[NASA-CASE-MFS-23720-1]	c43 N80-23711
Rotatable mass for a flywheel		Photoelectric detection system	
[NASA-CASE-MFS-23051-1]	c37 N79-10422	[NASA-CASE-MFS-23776-1]	c74 N80-25134
Water system virus detection		Cork-resin ablative insulation for complex	
[NASA-CASE-MSC-16098-1]	c51 N79-10693	surfaces and method for applying the same	
Anastigmatic three-mirror telescope		[NASA-CASE-MFS-23626-1]	c24 N80-26388
[NASA-CASE-MFS-23675-1]	c89 N79-10969	Apparatus for sequentially transporting containers	
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[NASA-CASE-MFS-23579-1]	c18 N79-11108	Electrical self-aligning connector	
Spherical bearing		[NASA-CASE-MFS-25211-1]	c33 N80-32651
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solar energy		the same	
[NASA-CASE-MFS-23518-1]	c44 N79-11469	[NASA-CASE-MFS-25312-1]	c74 N80-34251
System for the measurement of ultra-low stray		Beam connector apparatus and assembly	
light levels		[NASA-CASE-MFS-25134-1]	c31 N81-12283
[NASA-CASE-MFS-23513-1]	c74 N79-11865	Three phase power factor controller	
Simulator method and apparatus for practicing		[NASA-CASE-MFS-25535-1]	c33 N81-12330
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with a target		acoustical levitation forces	
[NASA-CASE-MFS-23052-2]	c74 N79-13855	[NASA-CASE-MFS-25050-1]	c71 N81-15767
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a metal oxide semiconductor device		apparatus and method	
[NASA-CASE-MFS-23541-1]	c76 N79-14906	[NASA-CASE-MFS-25305-1]	c35 N81-16427
Direct current transformer		Microwave integrated circuit for Josephson	
[NASA-CASE-MFS-23659-1]	c33 N79-17133	voltage standards	
Method of making a rocket nozzle		[NASA-CASE-MFS-23845-1]	c33 N81-17348
[NASA-CASE-XMF-06884-1]	c20 N79-21123	Process for preparation of large-particle-size	
Fluid thrust control system		monodisperse latexes	
[NASA-CASE-XMF-05964-1]	c20 N79-21124	[NASA-CASE-MFS-25000-1]	c25 N81-19242
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[NASA-CASE-XMF-04592-1]	c20 N79-21125	space structures	
Infusible silazane polymer and process for		[NASA-CASE-MFS-23981-1]	c33 N81-19394
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[NASA-CASE-XMF-02526-1]	c27 N79-21190	apparatus	
Fluorine-containing polyformals		[NASA-CASE-MFS-23923-1]	c35 N81-19426
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Method and apparatus for preparing		studying fluid flow	
multiconductor cable with flat conductors		[NASA-CASE-MFS-25315-1]	c36 N81-19440
[NASA-CASE-MFS-10946-1]	c31 N79-21226	Electrical power generating system	
Edge coating of flat wires		[NASA-CASE-MFS-24368-3]	c33 N81-22280
[NASA-CASE-XMF-05757-1]	c31 N79-21227	Method and apparatus for supercooling and	
Stable superconducting magnet		solidifying substances	
[NASA-CASE-XMF-05373-1]	c33 N79-21264	[NASA-CASE-MFS-25242-1]	c35 N81-24413
Retractable environmental seal		Solar tracking system	
[NASA-CASE-MFS-23646-1]	c37 N79-22474	[NASA-CASE-MFS-23999-1]	c44 N81-24520
Horizontally mounted solar collector		Prosthetic urinary sphincter	
[NASA-CASE-MFS-23349-1]	c44 N79-23481	[NASA-CASE-MFS-23717-1]	c52 N81-25660
Coal-shale interface detection		Pneumatic inflatable end effector	
[NASA-CASE-MFS-23720-3]	c43 N79-25443	[NASA-CASE-MFS-23696-1]	c54 N81-26718
General purpose rocket furnace		Power factor control system for ac induction	
[NASA-CASE-MFS-23460-1]	c12 N79-26075	motors	
Contour measurement system		[NASA-CASE-MFS-23988-1]	c33 N81-27395
[NASA-CASE-MFS-23726-1]	c43 N79-26439	Combinational logic for generating gate drive	
Method of construction of a multi-cell solar array		signals for phase control rectifiers	
[NASA-CASE-MFS-23540-1]	c44 N79-26475	[NASA-CASE-MFS-25208-1]	c33 N81-27402
Thickness measurement system		Method of and apparatus for double-exposure	
[NASA-CASE-MFS-23721-1]	c31 N79-28370	holographic interferometry	
Coal-rock interface detector		[NASA-CASE-MFS-25405-1]	c35 N81-27459
[NASA-CASE-MFS-23725-1]	c43 N79-31706		

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[NASA-CASE-NPO-13504-1] c33 N75-30430

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[NASA-CASE-NPO-13423-1] c33 N75-31329

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[NASA-CASE-NPO-13348-1] c33 N75-31332

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[NASA-CASE-NPO-13175-1] c36 N75-31427

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[NASA-CASE-NPO-13449-1] c36 N75-32441

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[NASA-CASE-NPO-12122-1] c24 N76-14203

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[NASA-CASE-NPO-13435-1] c31 N76-14284

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[NASA-CASE-NPO-13451-1] c33 N76-14373

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[NASA-CASE-NPO-13170-1] c35 N76-14430

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[NASA-CASE-NPO-13804-1] c33 N80-23559

Quartz ball valve  
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Method and apparatus for Doppler frequency modulation of radiation  
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Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c36 N80-24602

Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
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Geological assessment probe  
[NASA-CASE-NPO-14558-1] c46 N80-24906

Cooled echelle grating spectrometer  
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Improved method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-1] c37 N80-26660

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Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c52 N80-27072

Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c72 N80-27163

Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c28 N80-28536

System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c37 N80-29703

Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c44 N80-29835

Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183] c44 N80-29843

Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c76 N80-32244

Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c76 N80-32245

Interferometric locating system  
[NASA-CASE-NPO-14173-1] c04 N80-32359

Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c27 N80-32514

Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c27 N80-32515

System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c31 N80-32584

Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c32 N80-32605

Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c32 N80-32607

Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c33 N80-32650

Improving the efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c44 N80-32850

Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c33 N80-33679

Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c25 N81-14015

Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c27 N81-14076

Frequency translating phase conjugation circuit for active retrodirective antenna array  
[NASA-CASE-NPO-14536-1] c32 N81-14185

Precise RF timing signal distribution to remote stations  
[NASA-CASE-NPO-14749-1] c32 N81-14186

Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c33 N81-14220

Low cost cryostat  
[NASA-CASE-NPO-14513-1] c35 N81-14287

Power control for hot gas engines  
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Method and apparatus for fabricating improved solar cell modules  
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Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c27 N81-15104

Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c28 N81-15119

Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c31 N81-15154



Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c33 N81-15192

An electro-optical Doppler tracker means and method for optical correlation of synthetic aperture radar data  
[NASA-CASE-NPO-14998-1] c33 N81-15194

Tunable injection-locked pulsed CO<sub>2</sub> laser  
[NASA-CASE-NPO-14984-1] c36 N81-15350

Speed control device for a heavy duty shaft  
[NASA-CASE-NPO-14170-1] c37 N81-15364

Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c60 N81-15706

Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c31 N81-16328

An improved solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c33 N81-16385

Tactile sensing system  
[NASA-CASE-NPO-15094-1] c33 N81-16386

CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c47 N81-16677

Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c25 N81-17187

Molten salt pyrolysis of latex  
[NASA-CASE-NPO-14315-1] c27 N81-17261

Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c37 N81-17432

Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c44 N81-17518

System for forming a quadrified image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c74 N81-17886

Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c74 N81-17887

Interferometer  
[NASA-CASE-NPO-14502-1] c74 N81-17888

Fiberglass/epoxy composite automotive door structure including a glass-reinforced intrusion strip  
[NASA-CASE-NPO-15057-1] c24 N81-19230

Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c25 N81-19244

A cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c31 N81-19344

Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c33 N81-19389

Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c33 N81-19393

Antenna grout replacement system  
[NASA-CASE-NPO-15205-1] c37 N81-19457

Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c44 N81-19558

System and method for character recognition  
[NASA-CASE-NPO-11337-1] c74 N81-19896

X-ray position detector  
[NASA-CASE-NPO-12087-1] c74 N81-19898

Optical signature generating and correlating apparatus  
[NASA-CASE-NPO-15226-1] c74 N81-19899

Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c76 N81-19944

Controller for computer control of brushless dc motors  
[NASA-CASE-NPO-13970-1] c33 N81-20352

Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c52 N81-20703

Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c04 N81-22036

Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c74 N81-22894

Polymeric compositions and their method of manufacture  
[NASA-CASE-NPO-10424-1] c27 N81-24258

Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c33 N81-24338

System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c34 N81-24384

Mobile sampler for use in acquiring samples of terrestrial atmospheric gasses  
[NASA-CASE-NPO-15220-1] c35 N81-24414

Maser amplifier slow wave structure  
[NASA-CASE-NPO-15211-1] c36 N81-24425

Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c36 N81-24426

Stark effect spectrophone for continuous absorption spectra monitoring  
[NASA-CASE-NPO-15102-1] c25 N81-25159

Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c32 N81-25278

Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c37 N81-25370

Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c37 N81-25371

Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c39 N81-25400

Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c43 N81-26509

Schottky barrier cell and method of fabricating it  
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System for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c52 N81-26697

CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c33 N81-27396

Programmable scan/read circuitry for charge coupled device imaging detectors  
[NASA-CASE-NPO-15345-1] c33 N81-27403

Terminal guidance sensor system  
[NASA-CASE-NPO-14521-1] c37 N81-27519

A stable density-stratification solar pond  
[NASA-CASE-NPO-15419-1] c44 N81-27599

Medical diagnosis system and method with multispectral imaging  
[NASA-CASE-NPO-14402-1] c52 N81-27783

High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c60 N81-27814

Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c71 N81-27887

Asymmetric polyimide separation membrane and method  
[NASA-CASE-NPO-15431-1] c25 N81-29178

Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c32 N81-29308

Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c33 N81-29344

Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c44 N81-29525

Enhancement of in vitro Guayule propagation  
[NASA-CASE-NPO-15213-1] c51 N81-29728

Interferometer  
[NASA-CASE-NPO-14448-1] c74 N81-29963

Coal desulfurization  
[NASA-CASE-NPO-14272-1] c25 N81-33246

Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c28 N81-33306

Method and apparatus for producing concentric hollow spheres  
[NASA-CASE-NPO-14596-1] c31 N81-33319

Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c33 N81-33404

PN lock indicator for dithered PN code tracking loop  
[NASA-CASE-NPO-14435-1] c33 N81-33405

Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c35 N81-33448

Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c35 N81-33449

Head for high speed spinner having a vacuum chuck  
[NASA-CASE-NPO-15227-1] c37 N81-33482

Radiative cooler  
[NASA-CASE-NPO-15465-1] c18 N82-10106

Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c32 N82-10286

Solar energy modulator  
[NASA-CASE-NPO-15388-1] c44 N82-10496

Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c25 N82-11144

Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c37 N82-11469

Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c45 N82-11634

Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NPO-15295-1] c60 N82-11785

Systems for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c71 N82-11861

Hydrosulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c28 N82-12240

Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c28 N82-12241

Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c32 N82-12297

A pipelined digital SAR azimuth correlator using hybrid FFT/transversal-filter  
[NASA-CASE-NPO-15519-1] c32 N82-12298

Multiple-beam, high-power, precision pointing antenna system  
[NASA-CASE-NPO-15406-1] c33 N82-12345

Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c33 N82-12346

Microwave limb sounder  
[NASA-CASE-NPO-14544-1] c46 N82-12685

Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c71 N82-12889

Method and system for nuclear waste disposal  
[NASA-CASE-NPO-15454-1] c73 N82-12916

Paraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c35 N82-15381

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.**  
**WESTERN OPERATIONS OFFICE, SANTA MONICA, CALIF.**

Automatic pump Patent  
[NASA-CASE-XNP-04731] c15 N71-24042

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Densitometer Patent  
[NASA-CASE-XLE-00688] c14 N70-41330

**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, BOULDER, COLO.**

Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c07 N73-20175

**NATIONAL RESEARCH CORP., CAMBRIDGE, MASS.**

Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c14 N73-30390

Ultrahigh vacuum measuring ionization gauge  
[NASA-CASE-XLA-05087] c14 N73-30391

Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c14 N73-30394

Ultrahigh vacuum gauge having two collector electrodes  
[NASA-CASE-LAR-02743] c14 N73-32324

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[NASA-CASE-XNP-10007-1] c46 N74-23068

Rock sampling  
[NASA-CASE-XNP-09755] c46 N74-23069

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Laser apparatus  
[NASA-CASE-GSC-12237-1] c36 N80-14384

**NEW ENGLAND MEDICAL CENTER HOSPITALS, BOSTON, MASS.**

Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750

**NORTH AMERICAN AVIATION, INC., CANOGA PARK, CALIF.**

Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c15 N71-20443

Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c10 N71-26339

Safety-type locking pin  
[NASA-CASE-MFS-18495] c15 N72-11385

Hydrogen fire detection system with logic circuit to analyze the spectrum of temporal variations of the optical spectrum  
[NASA-CASE-MFS-13130] c10 N72-17173

**NORTH AMERICAN AVIATION, INC., DOWNEY, CALIF.**

Heat shield oven  
[NASA-CASE-XMS-04318] c15 N69-27871

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[NASA-CASE-XMF-07587] c15 N71-18701

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[NASA-CASE-MSC-11010] c15 N71-19485

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[NASA-CASE-XFP-07172] c05 N71-27234

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[NASA-CASE-XGS-01143] c31 N71-15647

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[NASA-CASE-XMS-09310] c15 N71-22706

Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c17 N71-23828

Method and apparatus for varying thermal conductivity Patent  
[NASA-CASE-XNP-05524] c33 N71-24876

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[NASA-CASE-XMS-04826] c28 N71-28849

Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c33 N71-28852

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[NASA-CASE-XNP-00650] c27 N71-28929

Spherical shield Patent  
[NASA-CASE-XNP-01855] c15 N71-28937

Universal restrainer and joint Patent  
[NASA-CASE-XNP-02278] c15 N71-28951

Method and device for cooling Patent  
[NASA-CASE-HQN-00938] c33 N71-29053

**NORTH AMERICAN AVIATION, INC., LOS ANGELES, CALIF.**

Method and system for respiration analysis Patent  
[NASA-CASE-XFP-08403] c05 N71-11202

**NORTH AMERICAN AVIATION, INC., TORRANCE, CALIF.**

Method and apparatus for detection and location of microleaks Patent  
[NASA-CASE-XMF-02307] c14 N71-10779

**NORTH AMERICAN AVIATION, INC., WOODLAND HILLS, CALIF.**

Fluid pressure balanced seal  
[NASA-CASE-XGS-01286-1] c37 N79-33469

**NORTH AMERICAN PHILIPS CO., INC., TARRYTOWN, N.Y.**

Linear magnetic bearings  
[NASA-CASE-GSC-12582-1] c37 N81-16469

**NORTH AMERICAN ROCKWELL CORP., CANOGA PARK, CALIF.**

Noncontaminating swabs  
[NASA-CASE-MFS-18100] c15 N72-11390

Observation window for a gas confining chamber  
[NASA-CASE-NPO-10890] c11 N73-12265

Droplet monitoring probe  
[NASA-CASE-NPO-10985] c14 N73-20478

Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c10 N73-25243

Heat flow calorimeter  
[NASA-CASE-GSC-11434-1] c34 N74-27859

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[NASA-CASE-MSC-13047-1] c31 N71-25434

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[NASA-CASE-MSC-15474-1] c15 N71-26162

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[NASA-CASE-XMF-02221] c18 N71-27170

Frangible link  
[NASA-CASE-MSC-11849-1] c15 N72-22488

Impact monitoring apparatus  
[NASA-CASE-MSC-15626-1] c14 N72-25411

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[NASA-CASE-MSC-12357] c15 N73-12489

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[NASA-CASE-MSC-15567-1] c33 N73-16918

Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c33 N74-14956

Apparatus for remote handling of materials  
[NASA-CASE-LAR-10634-1] c37 N74-18123

Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c37 N75-19683

**NORTH AMERICAN ROCKWELL CORP., EL SEGUNDO, CALIF.**

Apparatus for testing wiring harness by vibration generating means  
[NASA-CASE-MSC-15158-1] c14 N72-17325

## NORTH AMERICAN ROCKWELL CORP., LOS ANGELES, CALIF.

Tactile sensing means for prosthetic limbs  
[NASA-CASE-MFS-16570-1] c05 N73-32013

## NORTH CAROLINA STATE UNIV., RALEIGH.

Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c18 N73-14584  
Thermal shock and erosion resistant tantalum  
carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206

## NORTHEASTERN UNIV., BOSTON, MASS.

Pulse-width modulation multiplier Patent  
[NASA-CASE-XEE-09213] c07 N71-12390

## NORTHEOP CORP., HAWTHORNE, CALIF.

Shock tube bypass piston tunnel  
[NASA-CASE-NPO-12109] c11 N72-22245  
Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c18 N75-27040

## NORTHEOP ELECTRONICS, PALOS VERDES PENINSULA, CALIF.

Method of making dry electrodes  
[NASA-CASE-FRC-10029-2] c05 N72-25121  
Valve seat  
[NASA-CASE-NPO-10606] c15 N72-25451

## NORTHEOP SPACE LABS., HAWTHORNE, CALIF.

Method of evaluating moisture barrier properties  
of encapsulating materials Patent  
[NASA-CASE-NPO-10051] c18 N71-24934

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Flexible conductive disc electrode Patent  
[NASA-CASE-FRC-10029] c09 N71-24618  
Gas low pressure low flow rate metering system  
Patent  
[NASA-CASE-FRC-10022] c12 N71-26546  
Method of removing insulated material from  
insulated wires  
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Synthesis of polymeric schiff bases by  
schiff-base exchange reactions Patent  
[NASA-CASE-XMF-08651] c06 N71-11236  
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two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c06 N71-11239  
Azine polymers and process for preparing the  
same Patent  
[NASA-CASE-XMF-08656] c06 N71-11242  
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of acetals and amine compounds Patent  
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Aromatic diamine-aromatic dialdehyde high  
molecular weight Schiff base polymers prepared  
in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c06 N71-24740

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maps from multispectral data  
[NASA-CASE-MSC-14472-1] c43 N77-10584  
Interactive color display for multispectral  
imagery using correlation clustering  
[NASA-CASE-MSC-16253-1] c32 N79-20297

## OCCIDENTAL RESEARCH CORP., LA VERNE, CALIF.

Process for preparing higher oxides of the  
alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c26 N78-32229

## OHIO STATE UNIV., COLUMBUS.

Born antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c32 N76-15330  
Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c35 N80-18359

## OLD DOMINION UNIV., NORFOLK, VA.

Instrumentation for measuring aircraft noise and  
sonic boom  
[NASA-CASE-LAR-11476-1] c07 N76-27232  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c71 N78-14867  
High-temperature microphone system  
[NASA-CASE-LAR-12375-1] c32 N79-24203  
Aerodynamic side-force alleviator means  
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Leading edge vortex flaps for drag reduction  
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Method for separating biological cells  
[NASA-CASE-MFS-23883-1] c51 N80-16715

## ORGANON DIAGNOSTICS, EL MONTE, CALIF.

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[NASA-CASE-XNF-02029] c14 N70-41955

## PANAUARA CORP., PENNSAUKEN, N. J.

Method of forming transparent films of ZnO  
[NASA-CASE-FRC-10019] c15 N73-12487

## PCB, INC., GAINESVILLE, FLA.

Perfluoroalkyl polytriazines containing pendent  
iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c25 N81-14016

## PENINSULAR CHEMRESEARCH, INC., GAINESVILLE, FLA.

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[NASA-CASE-NPO-10768] c06 N71-27254

Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c06 N72-20121

Polyurethane resins from hydroxy terminated  
perfluoro ethers  
[NASA-CASE-NPO-10768-2] c06 N72-27144

Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-2] c06 N72-27151

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## PENNSYLVANIA STATE UNIV., UNIVERSITY PARK.

Process for the preparation of  
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Frequency modulation demodulator threshold  
extension device Patent  
[NASA-CASE-MSC-12165-1] c07 N71-33696

## PHILCO-FORD CORP., NEWPORT BEACH, CALIF.

Mechanically extendible telescoping boom  
[NASA-CASE-NPO-11118] c03 N72-25021

## PHILCO-FORD CORP., PALO ALTO, CALIF.

Composite antenna feed  
[NASA-CASE-GSC-11046-1] c07 N73-28013

Amplitude steered array  
[NASA-CASE-GSC-11446-1] c33 N74-20860

## PHOENIX CORP., MCLEAN, VA.

External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c36 N79-14362

Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c36 N81-12407

## PITTSBURG UNIV., PA.

Method and device for the detection of phenol  
and related compounds  
[NASA-CASE-LEW-12513-1] c25 N79-22235

## PLANNING RESEARCH CORP., MCLEAN, VA.

Telephone multiline signaling using common  
signal pair  
[NASA-CASE-KSC-11023-1] c32 N79-23310

## PRATT AND WHITNEY AIRCRAFT, EAST HARTFORD, CONN.

Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c15 N70-40062

Vibration damping system Patent  
[NASA-CASE-XMS-01620] c23 N71-15673

Vapor pressure measuring system and method Patent  
[NASA-CASE-XMS-01618] c14 N71-20741

Sealing member and combination thereof and  
method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c15 N71-23022

## Q

## QUANTUM DYNAMICS, TARBANA, CALIF.

Respiratory analysis system and method  
[NASA-CASE-MSC-13436-1] c05 N73-32015

## R

## RADIATION, INC., MELBOURNE, FLA.

Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c15 N75-13007

## RADIATION INSTRUMENT DEVELOPMENT LAB., INC.,

## MELROSE PARK, ILL.

High speed binary to decimal conversion system  
Patent  
[NASA-CASE-XGS-01230] c08 N71-19544

## RADIATION SYSTEMS, INC., MCLEAN, VA.

Monopulse tracking system Patent  
[NASA-CASE-XGS-01155] c10 N71-21483

## RADIO CORP. OF AMERICA, LANCASTER, PA.

Bonding graphite with fused silver chloride  
[NASA-CASE-XGS-00963] c15 N69-39735

## RADIO CORP. OF AMERICA, NEW YORK.

Water cooled contactor for anode in carbon arc

mechanism  
 [NASA-CASE-XMS-03700] c15 N69-24266  
 Apparatus for ballasting high frequency transistors  
 [NASA-CASE-XGS-05003] c09 N69-24318  
 Helical coaxial resonator RF filter  
 [NASA-CASE-XGS-02816] c07 N69-24323  
 Radiation resistant silicon semiconductor devices Patent  
 [NASA-CASE-XGS-07801] c09 N71-12513  
 GaAs solar detector using manganese as a doping agent Patent  
 [NASA-CASE-XNP-01328] c26 N71-18064  
 Thermocouple assembly Patent  
 [NASA-CASE-XNP-01659] c14 N71-23039  
 Method of erasing target material of a vidicon tube or the like Patent  
 [NASA-CASE-XNP-06028] c09 N71-23189  
 Transient augmentation circuit for pulse amplifiers Patent  
 [NASA-CASE-XNP-01068] c10 N71-28739  
**RADIO CORP. OF AMERICA, PRINCETON, N. J.**  
 Connector strips-positive, negative and T tabs  
 [NASA-CASE-XGS-01395] c03 N69-21539  
 Solar cell including second surface mirrors Patent  
 [NASA-CASE-NPO-10109] c03 N71-11049  
 Collapsible reflector Patent  
 [NASA-CASE-XMS-03454] c09 N71-20658  
 Simple method of making photovoltaic junctions Patent  
 [NASA-CASE-XNP-01960] c09 N71-23027  
 Method of electrolytically binding a layer of semiconductors together Patent  
 [NASA-CASE-XNP-01959] c26 N71-23043  
 Method and apparatus for distillation of liquids Patent  
 [NASA-CASE-XNP-08124] c15 N71-27184  
 Maximum power point tracker Patent  
 [NASA-CASE-GSC-10376-1] c14 N71-27407  
 Method of changing the conductivity of vapor deposited gallium arsenide by the introduction of water into the vapor deposition atmosphere Patent  
 [NASA-CASE-XNP-01961] c26 N71-29156  
 Radial heat flux transformer  
 [NASA-CASE-NPO-10828] c33 N72-17948  
 Target acquisition antenna  
 [NASA-CASE-GSC-10064-1] c10 N72-22235  
 Method for distillation of liquids  
 [NASA-CASE-XNP-08124-2] c06 N73-13129  
 Hermetically sealed semiconductor  
 [NASA-CASE-GSC-10791-1] c15 N73-14469  
 Thermal flux transfer system  
 [NASA-CASE-NPO-12070-1] c28 N73-32606  
 Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly  
 [NASA-CASE-GSC-11560-1] c33 N74-20861  
 Frequency measurement by coincidence detection with standard frequency  
 [NASA-CASE-MSC-14649-1] c33 N76-16331  
**RAND CORP., SANTA MONICA, CALIF.**  
 Satellite communication system Patent  
 [NASA-CASE-XNP-02389] c07 N71-28900  
**RAYMOND ENGINEERING LAB., INC., MIDDLETOWN, CONN.**  
 Synchronous servo loop control system Patent  
 [NASA-CASE-XNP-03744] c10 N71-20448  
**RAYTHEON CO., SUDBURY, MASS.**  
 Laser Doppler system for measuring three dimensional vector velocity Patent  
 [NASA-CASE-MFS-20386] c21 N71-19212  
 Clear air turbulence detector  
 [NASA-CASE-MFS-21244-1] c36 N75-15028  
**RCA CORP., PRINCETON, N. J.**  
 Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
 [NASA-CASE-NPO-14298-1] c76 N80-32244  
 Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
 [NASA-CASE-NPO-14297-1] c33 N81-19389  
**RCA LABS., PRINCETON, N. J.**  
 Solar cell with improved N-region contact and method of forming the same  
 [NASA-CASE-NPO-14205-1] c44 N79-31752  
**RCA SERVICE CO., INC., CAMDEN, N. J.**  
 Apparatus for inspecting microfilm Patent  
 [NASA-CASE-MFS-20240] c14 N71-26788  
**REESSELAAR POLYTECHNIC INST., TROY, N. Y.**  
 Coincidence apparatus for detecting particles  
 [NASA-CASE-XLA-07813] c14 N72-17328  
 Dual acting slit control mechanism  
 [NASA-CASE-LAR-11370-1] c35 N80-28686  
**RESEARCH TRIANGLE INST., DURHAM, N. C.**  
 Semiconductor p-n junction stress and strain sensor  
 [NASA-CASE-XLA-04980] c09 N69-27422  
**ROCHESTER UNIV., N. Y.**  
 Concave grating spectrometer Patent  
 [NASA-CASE-XGS-01036] c14 N70-40003  
**ROCKETDYNE, CANOGA PARK, CALIF.**  
 Frequency to analog converter Patent  
 [NASA-CASE-XNP-07040] c08 N71-12500  
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 [NASA-CASE-XMS-06782] c32 N71-15974  
 Thermobulb mount Patent  
 [NASA-CASE-NPO-10158] c33 N71-16356  
 Laminar flow enhancement Patent  
 [NASA-CASE-NPO-10122] c12 N71-17631  
 Temperature sensitive flow regulator Patent  
 [NASA-CASE-MFS-14259] c15 N71-19213  
 Hydrogen leak detection device Patent  
 [NASA-CASE-MFS-11537] c14 N71-20442  
 Technique of elbow bending small jacketed transfer lines Patent  
 [NASA-CASE-XNP-10475] c15 N71-24679  
 Gas liquefaction and dispensing apparatus Patent  
 [NASA-CASE-NPO-10070] c15 N71-27372  
 Locking device for turbine rotor blades Patent  
 [NASA-CASE-XNP-00816] c28 N71-28928  
 Laser camera and diffusion filter therefore Patent  
 [NASA-CASE-NPO-10417] c16 N71-33410  
 Hydrazinium nitroformate propellant stabilized with nitroguanidine  
 [NASA-CASE-NPO-12000] c27 N72-25699  
 Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
 [NASA-CASE-NPO-12015] c27 N73-16764  
 Novel polymers and method of preparing same  
 [NASA-CASE-NPO-10998-1] c06 N73-32029  
 Internally supported flexible duct joint  
 [NASA-CASE-MFS-19193-1] c37 N75-19686  
 Method of heat treating age-hardenable alloys  
 [NASA-CASE-XNP-01311] c26 N75-29236  
 Thrust measurement  
 [NASA-CASE-XMS-05731] c35 N75-29382  
 Device for installing rocket engines  
 [NASA-CASE-MFS-19220-1] c20 N76-22296  
**ROCKWELL INTERNATIONAL CORP., CANOGA PARK, CALIF.**  
 Brazing alloy binder  
 [NASA-CASE-XMF-05868] c26 N75-27125  
 Brazing alloy composition  
 [NASA-CASE-XMF-06053] c26 N75-27126  
 Brazing alloy  
 [NASA-CASE-XNP-03878] c26 N75-27127  
 Method and apparatus for vibration analysis utilizing the Mossbauer effect  
 [NASA-CASE-XMF-05882] c35 N75-27329  
 Externally supported internally stabilized flexible duct joint  
 [NASA-CASE-MFS-19194-1] c37 N76-14460  
 Accumulator  
 [NASA-CASE-MFS-19287-1] c34 N77-30399  
 Laser extensometer  
 [NASA-CASE-MFS-19259-1] c36 N78-14380  
 Stable superconducting magnet  
 [NASA-CASE-XMF-05373-1] c33 N79-21264  
**ROCKWELL INTERNATIONAL CORP., DOWNEY, CALIF.**  
 Apparatus for positioning modular components on a vertical or overhead surface  
 [NASA-CASE-LAR-11465-1] c37 N76-21554  
 Flanged major modular assembly jig  
 [NASA-CASE-MSC-19372-1] c39 N76-31562  
 Aircraft-mounted crash-activated transmitter device  
 [NASA-CASE-MFS-16609-3] c03 N76-32140  
 Window defect planar mapping technique  
 [NASA-CASE-MSC-19442-1] c74 N77-10899  
 Mechanical sequencer  
 [NASA-CASE-MSC-19536-1] c37 N77-22482  
 Load regulating latch  
 [NASA-CASE-MSC-19535-1] c37 N77-32499  
 Adjustable securing base  
 [NASA-CASE-MSC-19666-1] c37 N78-17383  
 Method of producing complex aluminum alloy parts of high temper, and products thereof  
 [NASA-CASE-MSC-19693-1] c26 N78-24333  
 Flexible pile thermal barrier insulator  
 [NASA-CASE-MSC-19568-1] c34 N78-25350

Variable contour securing system  
[NASA-CASE-MSC-16270-1] c37 N78-27423

Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c09 N78-31129

Sequencing device utilizing planetary gear set  
[NASA-CASE-MSC-19514-1] c37 N79-20377

System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c33 N79-28415

Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c20 N80-18097

Floating nut retention system  
[NASA-CASE-MSC-16938-1] c37 N80-23653

Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c26 N80-28492

Complementary cross-slot phased array antenna  
[NASA-CASE-MSC-18532-1] c32 N80-29543

Coaxial phased array antenna  
[NASA-CASE-MSC-16800-1] c32 N81-14187

Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c37 N81-14317

Thermal barrier pressure seal  
[NASA-CASE-MSC-18134-1] c37 N81-15363

Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c37 N81-24446

Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c32 N82-11336

**ROCKWELL INTERNATIONAL CORP., LOS ANGELES, CALIF.**

Length mode piezoelectric ultrasonic transducer for inspection of solid objects  
[NASA-CASE-MSC-19672-1] c38 N79-14398

**ROPH CORP., CHULA VISTA, CALIF.**

Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c15 N72-24522

**ROYAL AIRCRAFT ESTABLISHMENT, FARNBOROUGH (ENGLAND).**

Garments for controlling the temperature of the body Patent  
[NASA-CASE-XMS-10269] c05 N71-24147

**RYAN AERONAUTICAL CO., SAN DIEGO, CALIF.**

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[NASA-CASE-XMS-00907] c02 N70-41630

Masking device Patent  
[NASA-CASE-XNP-02092] c15 N70-42033

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**SAN JOSE STATE UNIV., CALIF.**

Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c25 N80-23383

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N81-14613

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[NASA-CASE-ARC-11118-1] c52 N81-29764

**SANDERS ASSOCIATES, INC., WASHUA, N. H.**

Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c09 N71-23316

**SANTA BARBARA RESEARCH CENTER, GOLETA, CALIF.**

Scanner  
[NASA-CASE-GSC-12032-2] c43 N82-13465

**SANTA CLARA UNIV., CALIF.**

Reversed cowl flap inlet thrust augmentor  
[NASA-CASE-ARC-10754-1] c07 N75-24736

Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c07 N76-18131

System for measuring Reynolds in a turbulently flowing fluid  
[NASA-CASE-ARC-10755-2] c34 N76-27517

System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c34 N77-27345

**SCHJELDAHL (G. T.) CO., NORTHFIELD, MINN.**

Rotating mandrel for assembly of inflatable devices Patent  
[NASA-CASE-XLA-04143] c15 N71-17687

Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c15 N71-24164

**SCIENCE APPLICATIONS, INC., LA JOLLA, CALIF.**

Vitra-violet process for producing flame resistant polyamides and products produced thereby  
[NASA-CASE-MSC-16074-1] c27 N80-26446

**SCOTT AVIATION CORP., LANCASTER, N. Y.**

Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c54 N76-24900

**SERV-AIR, INC., EDWARDS, CALIF.**

Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c33 N80-26599

**SERV-AIR, INC., HOUSTON, TEX.**

Stator rotor tools  
[NASA-CASE-MSC-16000-1] c37 N78-24544

**SHELDON CO., NORTHFIELD, MINN.**

Method and apparatus for preparing multiconductor cable with flat conductors  
[NASA-CASE-MFS-10946-1] c31 N79-21226

Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c31 N79-21227

**SIKORSKY AIRCRAFT, STRATFORD, CONN.**

Locking redundant link  
[NASA-CASE-LAR-11900-1] c37 N79-14382

**SINGER-GENERAL PRECISION, INC., BINGHAMTON, N. Y.**

CRT blanking and brightness control circuit  
[NASA-CASE-KSC-10647-1] c10 N72-31273

**SMITH ELECTRONICS, INC., CLEVELAND, OHIO.**

Phase detector assembly Patent  
[NASA-CASE-XMF-00701] c09 N70-40272

**SMITHSONIAN ASTROPHYSICAL OBSERVATORY, CAMBRIDGE, MASS.**

Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
[NASA-CASE-HQN-10654-1] c16 N73-13489

Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c36 N74-11313

**SOLID STATE RADIATIONS, INC., LOS ANGELES, CALIF.**

Biomedical radiation detecting probe Patent  
[NASA-CASE-XMS-01177] c05 N71-19440

**SOUTHERN METHODIST UNIV., DALLAS, TEX.**

Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c44 N78-24609

**SOUTHERN RESEARCH INST., BIRMINGHAM, ALA.**

Infusible silazane polymer and process for producing same  
[NASA-CASE-XMF-02526-1] c27 N79-21190

**SPACE SCIENCES, INC., WALTHAM, MASS.**

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[NASA-CASE-HQN-10740-1] c72 N74-19310

**SPACE TECHNOLOGY LABS., INC., REDONDO BEACH, CALIF.**

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[NASA-CASE-XGS-00823] c10 N71-15910

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[NASA-CASE-XLE-00820] c14 N71-16014

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[NASA-CASE-XGS-00824] c15 N71-16078

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[NASA-CASE-XLE-02038] c09 N71-16086

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[NASA-CASE-XNP-00826] c03 N71-20895

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[NASA-CASE-XNP-02888] c18 N71-21068

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[NASA-CASE-XGS-05441] c10 N71-22962

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[NASA-CASE-XNP-03972] c15 N71-23048

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[NASA-CASE-XNP-01107] c10 N71-28859

**SPACELABS, INC., VAN NUYS, CALIF.**

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[NASA-CASE-FRC-10010] c10 N71-24862

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[NASA-CASE-FRC-10012] c14 N72-17329

**SPACO, INC., HUNTSVILLE, ALA.**

Sight switch using an infrared source and sensor Patent  
[NASA-CASE-XMF-03934] c09 N71-22985

Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c14 N71-28993

**SPECTRA-PHYSICS, INC., MOUNTAIN VIEW, CALIF.**

Optically pumped resonance magnetometer for determining vectoral components in a spatial coordinate system Patent  
[NASA-CASE-XGS-04879] c14 N71-20428

## SPECTROLAB, INC., SYLMAR, CALIF.

Ultraviolet filter  
[NASA-CASE-XNP-02340] c23 N69-24332  
Central spar and module joint Patent  
[NASA-CASE-XNP-02341] c15 N71-21531  
Apparatus for applying cover slides  
[NASA-CASE-NPO-10575] c03 N72-25019  
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[NASA-CASE-XMS-05307] c09 N69-24330  
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[NASA-CASE-XGS-03058] c10 N71-19547  
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[NASA-CASE-MFS-20068] c07 N71-27191  
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[NASA-CASE-MFS-20453] c15 N71-29133  
Frequency division multiplex technique  
[NASA-CASE-KSC-10521] c07 N73-20176  
Device for configuring multiple leads  
[NASA-CASE-MFS-22133-1] c33 N74-26977  
System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c37 N75-33395  
Remotely operable articulated manipulator  
[NASA-CASE-MFS-22707-1] c37 N76-15457  
Photovoltaic cell array  
[NASA-CASE-MFS-22458-1] c44 N77-10635  
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[NASA-CASE-MFS-23303-1] c32 N77-18307  
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[NASA-CASE-XLA-04897] c15 N72-22482  
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[NASA-CASE-XNP-02251] c12 N71-20896  
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[NASA-CASE-NPO-10242] c09 N71-24803  
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[NASA-CASE-NPO-10234] c06 N72-17094  
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[NASA-CASE-ARC-10042-2] c10 N72-11256  
Multiloop RC active filter apparatus having low parameter sensitivity with low amplifier gain  
[NASA-CASE-ARC-10192] c09 N72-21245  
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[NASA-CASE-HQN-10439] c21 N72-21624  
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[NASA-CASE-HQN-10844-1] c36 N75-19653  
Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c33 N75-27251  
Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c27 N78-32260  
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[NASA-CASE-ARC-11169-1] c24 N79-24062  
Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c37 N79-28551  
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[NASA-CASE-XAC-05462-2] c10 N72-17171  
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SYLVANIA ELECTRONIC SYSTEMS-CENTRAL, WILLIAMSVILLE, N. Y.  
Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c16 N72-13437  
Altitude sensing device  
[NASA-CASE-XMS-01994-1] c14 N72-17326

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## TAAG DESIGNS, INC., COLLEGE PARK, MD.

Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c03 N72-11062  
Phototropic composition of matter  
[NASA-CASE-XGS-03736] c14 N72-22443  
TAFT BROADCASTING CORP., HOUSTON, TEX.  
Television noise reduction device  
[NASA-CASE-MSC-12607-1] c32 N75-21485  
TAMARACK SCIENTIFIC CO., INC., ORANGE, CALIF.  
Detector absorptivity measuring method and apparatus  
[NASA-CASE-LAR-10907-1] c35 N76-29551  
TECHNICOLOR, INC., PARAMUS, N.J.  
Automatic lightning detection and photographic system  
[NASA-CASE-KSC-10728-1] c14 N73-32319  
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[NASA-CASE-MFS-20586] c15 N71-17686  
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[NASA-CASE-LEW-12989-1] c37 N82-12442  
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[NASA-CASE-LEW-12991-1] c37 N81-24442  
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[NASA-CASE-MSC-13999-1] c52 N74-26626  
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[NASA-CASE-MSC-13407-1] c10 N72-20225  
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TELEDYNE BROWN ENGINEERING, HUNTSVILLE, ALA.  
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[NASA-CASE-MFS-20774] c14 N73-19420  
TEMPLE UNIV. RESEARCH INST., PHILADELPHIA, PA.  
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[NASA-CASE-LAR-10670-1] c06 N73-30097  
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[NASA-CASE-LAR-10670-2] c15 N74-27360  
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[NASA-CASE-MFS-23315-1] c76 N78-24950  
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[NASA-CASE-GSC-10835-1] c09 N72-33205  
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[NASA-CASE-NPO-14424-1] c33 N80-32650  
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Insulated electrocardiographic electrodes  
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THIokol CHEMICAL CORP., BRISTOL, PA.  
Casting propellant in rocket engine  
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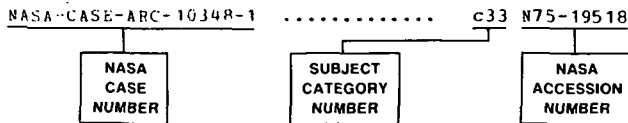
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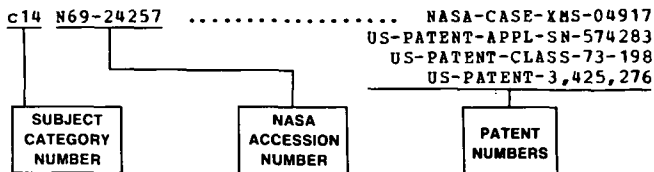
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c14 N69-24331	NASA-CASE-XNP-03930	US-PATENT-CLASS-250-237	US-PATENT-APPL-SN-568346
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